

What is the relationship between hybrid flexible delivery and the level
of critical engagement in tertiary education?

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Certification

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Christine Adams.

Abstract

Today many educators in the tertiary education environment face the dilemma of having to provide learning richness and a quality learning experience to growing numbers of students in an environment of reducing resources (Broad et al., 2000; Nunan et al., 2000; Bonk & Graham, 2006). These challenges are influenced a number of factors. Where resources are scarce tertiary education providers need to learn to use what is available to its full potential and to make wise investments by paying closer attention to how technology is used, introduced and managed (Buchan, 2008; Broad et al., 2000; Nunan et al., 2000; Bonk & Graham, 2006). The changes to funding arrangements; a decrease in government subsidies and the trends towards user-pays; pressures on universities to generate other sources of income; a rapid growth in the higher education export markets and changing student expectations are also seen as key factors impacting on the tertiary education environment (Scott et al. 2008). Further, 'the massification and internationalisation of Australian tertiary education' has meant that student diversity has increased, and therefore effective teaching requires the ability to manage diversity (Devlin & Samarawickrema, 2010).

In order to engage students, teachers must have appropriate pedagogical responses to accommodate a variety of student learning styles and cultural and educational backgrounds (Devlin, 2007c). While flexible course delivery methods have been in use for some time, increasingly we are seeing a move away from sole reliance on either traditional face-to-face or flexible teaching and assessment methods, towards an increase in the number of courses offered by hybrid flexible delivery which is a blend of face-to-face and flexible delivery methods (Selim, 2010; Vaughan, 2010).

As stated, effective teaching in tertiary education is linked to technological changes (Devlin, 2007a). Teachers must continually learn new skills and familiarise themselves with new ways of interacting and communicating with students and be capable of teaching in 'blended' environments employing technologies and pedagogies suited to the context and student cohort (Benson & Samarawickrema, 2009). Garrison and Vaughan (2008) point out however, that research into many of these significant technological innovations and changes in delivery have been confined to addressing the issues of access and convenience, such as the relevance and suitability of the method, yet the quality of the learning experience has yet to be properly examined.

Given the changes to the tertiary education environment this research aims to identify what is the relationship between hybrid flexible delivery and the level of critical engagement in tertiary education. There are many definitions of critical engagement but it is generally seen to be concerned with the extent students are engaging in a range of educational activities that research has shown as likely to lead to high quality outcomes (Coates, 2005). For the purpose of this research students' perception of their learning engagement is being measured; that is their success in achieving 'critical engagement' as the learning outcome embedded in the unit design and required to achieve the specified unit learning outcomes. Student's perception of their learning engagement is also measured by changes in their confidence levels in achieving the unit learning outcomes at pre-unit and post-unit. Students' perception is also measured by the change in their level of agreement, at pre-unit and post-unit, regarding the degree the teaching and assessment methods used contribute to learning. Also students' perception regarding the degree of change regarding whether the unit teaching and assessment methods assist in developing

high level academic, critical reasoning skills and useful practical work-related skills is also measured. In summary this research focus is to explore:

To what extent are students critically engaged by hybrid flexible delivery?

What aspects of hybrid flexible delivery most affect the level of critical engagement?

Does the level of critical engagement differ according to age, gender, first language, year of enrolment or the level of student prior achievement?

This research involved a mixed-method longitudinal study of predominately international Master of Business Administration students enrolled in a Strategic Management unit. Respondents completed two questionnaires: one pre-unit and one post-unit.

From this research it can be concluded that hybrid flexible delivery methods can facilitate critical engagement but any unit offered by this method should include both practical and theoretical elements in its design. Teachers need to ensure that theory is relevant and useful to students and is used to challenge and extend ways of thinking. By embedding each level of Bloom's Taxonomy a scaffolding approach to learning, within the learning outcomes can facilitate critical engagement in hybrid flexible delivery.

It can be concluded from this research that the difference in confidence levels and the performance of students seems to impact on the level of critical engagement. The results suggest that the teacher's presence, in developing a community of inquiry, and the use of case study workshops, provided support to construct meaning and confirm understanding of the key issues in this unit (Garrison et al., 2004). It appears important for the teacher to consider the whole unit and 'weave through' rather than 'tack on' hybrid flexible delivery approaches and adopt the constructivist approach to learning. It could also be concluded that there is a

relationship between the level of critical engagement and the teacher-student relationship. Generally need the opportunity to build a relationship with the teacher early in the learning experience to achieve critical engagement.

The age of students is not a significant factor associated with the level of critical engagement in hybrid flexible delivery with the exception of older students who were more critically engaged than younger students. This study also found there was no significant difference in performance and the level of critical engagement by gender when hybrid flexible delivery methods are used. Males had a higher level of confidence in achieving the learning outcomes than females, but this was not statistically significant. It could be concluded that although there are no significant differences to the level of critical engagement by gender, males may prefer learning experiences that require less collaboration and interaction. It is suggested that a mix of learning strategies to satisfy both males and female learning styles may assist critical engagement in hybrid flexible delivery (Biggs & Tang, 2007). The number of respondents limited reliable assessment of the role of language and prior student level of achievement in critical engagement.

In a tertiary education environment which includes combinations of traditional face-to-face, flexible and hybrid flexible delivery methods, this research provides some reassurance that well designed hybrid flexible delivery programs can facilitate critical engagement. If teachers provide a greater emphasis on the correlations between learning outcomes, teaching and assessment methods and the levels of cognitive development, this can produce high levels of critical engagement.

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CHAPTER 1

INTRODUCTION

Chapter 1: Introduction

1.1 BACKGROUND SETTING

Today many educators face the dilemma of having to provide a rich learning environment to growing numbers of students. At the same time the challenge facing many educators is how to provide learning richness and a quality learning experience to growing numbers of students in an environment of reducing resources (Bonk & Graham, 2006; Broad et al., 2000; Nunan et al., 2000; Scott et. al., 2008; Selim, 2010). While flexible delivery methods have been in use for some time, increasingly we are seeing a move away from sole reliance on either traditional face-to-face or flexible teaching and learning methods, towards a blend of these methods (Selim, 2010; Vaughan, 2010). This blended or hybrid method of teaching, which hereon in for the purposes of this research is termed hybrid flexible delivery, introduces flexibility through the electronic delivery of content in combination with regular face-to-face group, and individual contact (Arbaugh & Rau, 2007; Dowling et al., 2003). In other words, it is the integration of classroom face-to-face experience with on-line experiences (Garrison et al., 2004; Garrison & Vaughan, 2008).

Whether we are primarily interested in creating more effective learning experiences, increasing access and flexibility or reducing the cost of learning, the existing research suggests it is highly likely that learning systems in the future will continue to incorporate hybrid flexible delivery.

The central theme of recent research into flexible delivery and hybrid flexible delivery is effective and learner-centre learning with a two cluster approach: firstly, the development of appropriate learning design, and secondly the assessment of students' satisfaction with the learning experience (Selim, 2010). The literature suggests that there is limited understanding of how hybrid flexible delivery affects

the learning experience and the level of critical engagement experienced by students (Arbaugh & Rau, 2007; Arbaugh, 2000; Drennan et al., 2005; Kirkpatrick & McLaughlin, 2000; Oliver & Omari, 2001).

Indeed, researchers have posited a range of perspectives on what ‘critical engagement’ actually means. One view provided by Cameron (2009) is that critical engagement can be facilitated in the learning environment by encouraging students to question the relevance and usefulness of theories to a manager’s practical context and to challenge and extend their ways of thinking about the context of their professional practice. Critical engagement can be a student’s academic commitment and application as shown in time and energy devoted to educationally purposeful activities (Horstmanshoff and Zimitat, 2007). It can mean studying for meaning and understanding (Crosling et al., 2009). Current developments in the contemporary classroom include the idea of the ‘flipped or reverse instruction’ classroom to facilitate critical engagement (Ronchetti, 2010).

1.2 ORIGINALITY AND SIGNIFICANCE

By addressing this gap in our understanding of the relationship between hybrid flexible delivery and critical engagement, research into which is in its infancy, this research is significant in academic terms. The research will contribute to the ongoing scholarly debate about what critical engagement actually means and how it is best measured. The research will add to the debate about why critical engagement is important in the context of learning and how hybrid flexible delivery affects the level of critical engagement. It will provide some insights into what factors may affect the level of critical engagement in hybrid flexible delivery (Arbaugh, 2000 Lim et al., 2007; Kirkpatrick & McLaughlin, 2000; Oliver & Omari, 2001).

The research also has practical significance for tertiary education practitioners given the changing social context of tertiary education and the drive in recent years towards the adoption of hybrid flexible delivery (Arbaugh, 2007). The increasing implementation of hybrid flexible delivery has prompted questions about whether or not hybrid flexible delivery methods provide a pedagogically sound foundation on which to provide educational programs in the tertiary environment (Bryant, Campbell & Kerr, 2001; O’Keefe & McGrath, 2000). There are also claims that aspects of hybrid flexible delivery are not grounded in convincing empirical evidence that it is beneficial for learning (Song, Singleton, Hill & Koh, 2004).

There are many different areas that researchers may need to address in regard to the impact of hybrid flexible delivery. This research represents one attempt to assess the nature of the relationship between hybrid flexible delivery and the level of critical engagement by students. It addresses, to some extent, the need for more rigorous comparison of traditional and alternative delivery methods and their impact on critical engagement. Previous comparative studies have generally not attempted to understand why or under what conditions, one method is more effective than the other in terms of the level of critical engagement (Arbaugh, 2005a). As such, this research is original and aims to provide valuable insights into this important subject area.

1.3 RESEARCH PROPOSITION

For the purpose of this research students’ perception of their learning engagement is being measured; that is their success in achieving ‘critical engagement’ as the learning outcome embedded in the Unit design and required to achieve the specified unit learning outcomes. Student’s perception of their learning engagement is also measured in three additional ways. Firstly, by the changes in their confidence levels in achieving the unit learning outcomes at pre-unit and post-unit. Secondly, by the

change in their level of agreement, at pre-unit and post-unit, regarding the degree the teaching and assessment methods used contribute to learning. Thirdly, by the degree of change regarding whether the unit teaching and assessment methods assist in developing high level academic, critical reasoning skills and useful practical work-related skills. The research intent is to explore:

To what extent are students critically engaged by hybrid flexible delivery?

What aspects of hybrid flexible delivery most affect the level of critical engagement?

Does the level of critical engagement differ according to age, gender, first language, year of enrolment or the level of student prior achievement?

These issues are addressed to in the discussion of Chapter 5.

1.4 THESIS STRUCTURE

The following chapters will provide a detailed description of all aspects of this research.

1.4.1 Chapter 2: Research issues

This chapter will review the literature and identify research issues providing a theoretical basis for this research. It will outline the characteristics of the tertiary education environment; describe its changing social context and outline the defining characteristics of traditional face-to-face delivery methods, flexible delivery and hybrid flexible delivery. The notion of critical engagement is discussed and why it is important in the context of student learning in tertiary education. Factors that contribute to critical engagement and that are common to traditional face-to-face, flexible and hybrid flexible delivery are outlined. This is followed by discussion of the factors that are specific to achieving critical engagement in hybrid flexible

delivery. The literature review concludes with a statement of the research proposition.

1.4.2 Chapter 3: Methodology

Chapter 3 presents the methodology for this research and outlines the research philosophy, methodological approaches, ethics and confidentiality, the framework for data analysis and data analysis techniques and limitations of the research are identified.

In particular the mixed-method longitudinal approach is explained, and detailed information provided on the quantitative (study sample, questionnaire, and sampling procedures) and qualitative (questionnaire, focus group) components of the collection process.

1.4.3 Chapter 4: Results

Chapter 4 presents the results of the statistical analyses performed in the relation to the research proposition. Response rates and variables are discussed. Explanatory variables are explained, descriptive statistics in relation to the responses to the questionnaire categories are reported then the relationship between pre-unit and post-unit responses and the actual grades (or results) achieved in terms of the level of performance and critical engagement, are outlined. Independent Samples T-Tests and the results of the regression analysis to test the statistical significance of the data are also reported.

1.4.4 Chapter 5: Discussion

This chapter discusses the meaning of the data collected in relation to the research proposition. The research findings, in light of existing research, are discussed

followed by the conclusions, the implications of the research for current theory and practice and recommendations for further research.

1.5 SUMMARY

The first section of this chapter presents background to the research project, key concepts to be examined in the research, explained originality and significance of the research, introduced the research proposition and set out the thesis structure.

CHAPTER 2

RESEARCH ISSUES

Chapter 2: Research Issues

2.1 INTRODUCTION

Chapter Two is a review of literature and identifies issues that provide a theoretical basis for this research.

In this chapter an overview of the changing social context of tertiary education is provided followed by a review of the literature on the characteristics of traditional face-to-face delivery method in tertiary education, flexible delivery and hybrid flexible delivery methods. A review of the literature on critical engagement and how it can be achieved through different delivery methods is discussed. This is followed by an examination of the key intellectual skills valued in adult learning and education and their relationship to critical engagement.

2.2 THE CHANGING SOCIAL CONTEXT OF THE TERTIARY EDUCATION ENVIRONMENT

The educational technology environment is becoming increasingly complex and poses significant challenges for all stakeholders in the tertiary education environment. Where resources are scarce tertiary education providers need to learn to use what is available to its full potential and to make wise investments by paying closer attention to how technology is used, introduced and managed (Buchan, 2008; Broad et al., 2000; Nunan et al., 2000; Bonk & Graham, 2006).

While the individual school, faculty and institution has its specific contextual impacts on teachers, teaching, students and student learning there are more complex societal, political, economic, technological and demographic change forces that impact on teaching in the tertiary education environment. The information communication revolution with its exponential increase in computer power has a strong influence the tertiary education environment. The rise of information

technologies such as digitized multimedia and the growing popularity of the Internet are contributing to the proliferation of e-learning. These technologies will continue to directly and indirectly influence tertiary education to change traditional delivery methods (Selim, 2010). Recent research highlights unrelenting technological advancements such as the Internet; pocket-sized computers; wireless web; iPhones; learning management systems such as Moodle and Desire to Learn; simulations and social media such as Facebook and Twitter (Cole & Foster, 2008). Garrison and Vaughan (2008) point out however, that research into many of these significant technological innovations in delivery has been confined to addressing issues of access and convenience (such as the relevance and suitability of the delivery method), yet the quality of the learning experience has yet to be properly examined.

The changes to funding arrangements; a decrease in government subsidies and the trends towards user-pays; pressures on universities to generate other sources of income; a rapid growth in the higher education export markets and changing student expectations are also seen as key factors impacting on the tertiary education environment (Scott et al. 2008). Further, 'the massification and internationalisation of Australian tertiary education' has meant that student diversity has increased, and therefore effective teaching requires the ability to manage diversity (Devlin & Samarawickrema, 2010).

In order to engage students, teachers must have appropriate pedagogical responses to accommodate a variety of student learning styles and cultural and educational backgrounds (Devlin, 2007c). Concurrently there has been an increase in institutions offering flexibility in course delivery, including the integration of paid work into formal learning experiences providing, for flexible 'anytime-anywhere' education (Devlin & Samarawickrema, 2010).

While flexible course delivery methods have been in use for some time, increasingly we are seeing a move away from sole reliance on either traditional face-to-face or flexible teaching and assessment methods, towards an increase in the number of courses offered by hybrid flexible delivery which is a blend of face-to-face and flexible delivery methods (Selim, 2010; Vaughan, 2010). This blended or hybrid method of teaching, which hereon in for the purposes of this research is termed hybrid flexible delivery, introduces flexibility through the electronic delivery of content in combination with regular face-to-face group, and individual contact (Dowling et al., 2003). In other words, it is the integration of classroom face-to-face experience with on-line experiences (Garrison et al., 2004; Garrison & Vaughan, 2008).

As stated, effective teaching in tertiary education is linked to technological changes (Devlin, 2007a). Teachers must continually learn new skills and familiarise themselves with new ways of interacting and communicating with students and be capable of teaching in 'blended' environments employing technologies and pedagogies suited to the context and student cohort (Benson & Samarawickrema, 2009). For example, the notion of the flipped or reverse instruction sees teachers using teacher-created videos that students view outside of class time. Students then apply the knowledge by doing practical work or problem-solving in the actual class. The flipped classroom allows the teacher to assume a more hands-on role in the classroom when students are assimilating information and creating new ideas that is at the upper end of Bloom's Taxonomy (Ronchetti, 2010).

The Australian Learning and Teaching Council (ALTC) have developed a set of criteria which are useful guidelines to provide the tertiary education sector with principles to improve teaching and learning across Australia (Australian Learning and Teaching Council, 2008). A recent national review of higher education,

commissioned by the Australian federal government highlights the importance of providing students with a stimulating and rewarding experience. This includes the level of engagement students experience through teacher-student and student-student interactions and opportunities for integrated learning experiences. The Australasian Survey of Student Engagement (AUSSE) (2009) which measures interactions has recommended that universities increase reporting on how teachers engage students (Devlin & Samarawickrema, 2010).

As noted in the past decade there has been a ‘rapid growth’ in the number of courses offered by hybrid flexible delivery (Vaughan, 2010: 60). As outlined the reasons are varied with some tertiary education providers citing organisational factors such as the cost and resource benefits or the ‘connective demands of prospective students’ (Garrison & Kanuka, 2004: 95). Harnish & Taylor-Murison (2012) cite the teaching and learning outcomes, the pedagogical benefits of using technology, and the flexibility it allows to respond to different learning styles as reasons for adopting hybrid flexible delivery. Furthermore it is likely that modern day students’ familiarity with technology exists to such an extent that there is an expectation that it be integrated into learning as it is to life.

There is evidence tertiary education providers are thinking about the essential learning experiences that facilitate the achievement of learning outcomes through critical engagement, and how to design an effective and engaging learning environment. There is a rethinking of the socially-constituted relationships between teachers-students and students-students and a focus on the kinds of interactions that need to be included in learning resources to generate engaging learning experiences (O’Sullivan & Samarawickrema, 2008).

In examining the research on the extent age and gender affect critical engagement in tertiary education, some research reports that more students of non-traditional age (older students that is over 25 years of age), have been found to prefer flexible delivery than traditional age 'college' students (college students being those engaged in tertiary education) (Koroghlanian & Brinkerhoff, 2007; El Mansour & Mupinga, 2007; Wyatt, 2005). Other studies have also found that older 'college' or tertiary education students report high levels of engagement in flexible delivery courses (Chen et. al., 2008; Robinson, 2006; Robinson & Hullinger, 2008). These studies refer specifically to flexible delivery methods in the 'college context'.

Older students (over 25 years of age) have reported the most gains in educational outcomes and higher order thinking in flexible delivery courses (Chen et al., 2008; Hiltz & Shea, 2005; Robinson, 2006; Robinson & Hullinger, 2008). Furthermore Robinson (2006) found that older students were more involved in collaborative work through flexible delivery methods. In a large study (n= 1,406) older students (particularly those in the 36-45 year range), reported learning the most and being more satisfied with flexible delivery than did the students under 25 years of age (Fredericksen et al., 1999). However, some studies have found that there is no correlation between student age and critical engagement in courses offered by flexible delivery (Bradford & Wyatt, 2010). What the research on age and participation in flexible delivery courses may indicate that it is important for teachers to recognise that critical engagement strategies employed for students considered to be of a traditional age, may not always be effective for older students in flexible delivery courses (Gibson & Slate, 2010). Similarly strategies employed for traditional age students in flexible delivery courses may not be as effective for older students but this assertion would need to be tested. Further research needs to be undertaken on the affects of age on the level of engagement in hybrid flexible delivery courses.

Some research reports that gender plays a role in the level of critical engagement in flexible delivery but there appears to be a lack of research regarding the role gender plays in hybrid flexible delivery. Females enrol in greater numbers of flexible delivery courses and tend to have higher completion rates (Del Pilar Lerma, 2011), and have been found to prefer flexible delivery methods over traditional face-to-face delivery methods (Koroghlanian & Brinkerhoff, 2007; Wyatt, 2005).

Females have been found to be significantly more critically engaged than male students in tertiary education (Kuh, 2001; 2003) and in flexible delivery methods specifically (Robinson, 2006). In Robinson's study (2006), females were more involved than males in collaborative work. In their review of literature on gender and flexible delivery, Hiltz and Shea (2005) found that females were more active participants in collaborative learning opportunities in asynchronous discussions in flexible delivery. On the other hand, in research on 24 MBA courses using Chickering and Gamson's (1986) Seven Principles for Good Practice, males were highly associated with perceived learning while females were associated with course satisfaction (Arbaugh & Hornich, 2006). This may be due to the difference between undergraduate and post-graduate student perceptions of flexible delivery. There is a lack of research on the relationship between gender, critical engagement and hybrid flexible delivery.

The research suggests that whether we are primarily interested in creating more effective learning experiences, increasing access and flexibility or reducing the cost of learning it is likely that future delivery methods will be a 'blend' or hybrid of both traditional face-to-face and flexible delivery methods (Bonk & Graham, 2006; Garrison & Vaughan, 2008). It is therefore important for those in the tertiary environment to understand the extent students are critically engaged by the

traditional face-to-face, flexible and hybrid flexible delivery methods and what factors affect the levels of student critical engagement (Drennan et al., 2005; Review of Higher Education Report, 2008).

2.3 THE TRADITIONAL DELIVERY METHOD

Traditional face-to-face delivery method is characterised by:

- Sequential and linear learning processes;
- Perceptions of teachers as experts with special knowledge;
- The careful sequencing of activities, including teaching and learning and assessment strategies;
- Pre-defined knowledge, skills and behaviours;
- The delivery of pre-selected knowledge;
- Summative evaluation as the basis for assessment and
- Learning models that are either behavioural or cognitive (Willis, 1995; Leidner & Javenpaa, 1995).

A number of instructional design models have been developed to help teachers incorporate fundamental elements of the instructional design process and principles into their teaching practice. Two commonly used models and principles are objectivist and constructivist (Moallem, 2001).

The underlying philosophical views of objectivist and constructivist models are theories of knowledge. Objectivists believe that knowledge and truth exist outside the mind of the learner and are therefore objective. Learners may be told about the world and be expected to replicate its structure and content in their

thinking (Jonassen, 1991 cited in Moallem, 2001). Constructivists believe that knowledge and trust are constructed by the learner and do not exist outside of his or her mind. Therefore according to constructivism, learners construct their own knowledge by actively participating in the learning process, collaborating, reflecting, and learning autonomously (Moallem, 2001).

Cognitive science also contributes to traditional models by emphasising the student's schema as an organised knowledge structure (Moallem, 2001). Studies by Sweeney and Ingram (2001 cited in Holley & Oliver, 2010) support the cognitive model of learning, which emphasises that learning is an active, constructivist and goal oriented process enhanced by sharing and equality during teacher-student and student-teacher discussion. Cognitivism sees learning as an active process in which learners build new ideas or concepts based on their current base of knowledge (Gery, 2002). According to this model, students learn better when they can develop knowledge through inquiry and experimentation instead of through the acquisition of facts presented by the teacher.

Delivery in a tertiary education setting which follows the traditional face-to-face model revolves around the lecture group, supported by tutorials that are designed to reinforce the material delivered by the lecturer (Mitchell & Hope, 2000), and are commonly supported by audio-visual equipment (Ataya, Brown, Gorham & Barker, 2002). Although various versions of traditional face-to-face delivery methods have evolved, most undergraduate units of study comprise three hours of contact per week in the form of a lecture and workshop/tutorial mix (Dowling et. al., 2003). A traditional lecture approach signals that the teacher is responsible for communicating the necessary information to students; however during the tutorial session there is usually more active student-centred learning, with the tutorial normally constituting only one-third (one hour) of the staff-student contact hours.

There are a number of benefits from employing the traditional face-to-face delivery method. Firstly interaction with teachers, who have technical/specific unit or subject knowledge, and feedback from students are important contributors to learning performance. The traditional delivery method fosters the human connection; it is easier to bond and develop a social presence in a face-to-face environment which can forge a higher degree of trust between teachers and students and among students (Bonk & Graham, 2006). Consequently, the traditional delivery method can foster spontaneity in discussion between teachers and students and can generate a rapid chain of associated ideas (Miulecky, 1998 cited in Bonk and Graham, 2006).

Johnson, Hornik and Salas (2008) examined social presence as a significant system design feature for improving instructional effectiveness and found that social presence predicted satisfaction with the subject unit and the value of its content. Social presence theory groups different communication media along a one-dimensional continuum where the degree of social presence is equated to the degree of the awareness of the other person in the communication interaction. On a continuum of social presence, the traditional face-to-face delivery method is considered to have the most social presence, while written, text-based communication the least (Short et. al., 1976). In a traditional face-to-face delivery method the teacher also plays an important role in helping to make learning materials culturally relevant and meaningful to students (Selinger 2005, cited in Bonk & Graham, 2006).

2.4 FLEXIBLE DELIVERY METHOD

A review of the literature notes that the effects of flexible delivery on the students' learning experience are being examined (Dowling et. al. 2003; Bryant et. al., 2003) through several empirical studies (Oliver and Omari, 2001; Smith, 2000; Dearn, 1998;

Nunan et al., 2000; Arbaugh, 2009). Many studies have noted a number of critical success factors (CSFs) which are important to the success of flexible delivery including teacher characteristics, information technology infrastructure and operational and technical support (Lim et al., 2007; Liaw et al., 2007a; Selim, 2010). Additionally the teacher's and student's attitude towards flexible delivery are seen as important to the effectiveness of flexible delivery (Liaw et al., 2007a).

The term flexible delivery is generally defined to mean the introduction of technology into the learning environment (Arbaugh, 2000; Arbaugh, 2007). The objective of flexible delivery is to significantly improve learning outcomes by allowing students to take responsibility for their own learning through being able to choose when, where and how they learn (Dowling et al. 2003; Kember, 1995; Richardson, 2000; Nunan et al., 2000; Nikolova & Collis, 1998; Wade, Hodgkinson, Smith & Arfield, 1994; Collis & Moonen, 2001 cited in Samarawickrema, 2005; Hill, 2006). As such flexible delivery methods have appeal to individual learners (Van den Eynde, Newcombe, & Steel, 2007; Bryant, Campbell, & Kerr, 2003; Collis & Moonen, 2001; McInnis & Hartley, 2008 cited in Hamilton and Singwhat, 2009). Ultimately the educational goals of the flexible delivery method are to increase student learning outcomes by better enhancing students' engagement with the material and their commitment to learning (Hamilton & Singwhat, 2009; Alexander, 1999).

Flexible delivery methods allow student learning needs and choices to be placed at the centre of educational decision making. They signify a shift from locating formal, whole classes, and didactic teaching at the centre of the learning process, towards individual or group-based management of learning using structured resource materials (University of Queensland Working Party on Flexible Delivery, cited in Drennan et. al., 2005). The flexible delivery method is an approach

to education which allows duration, intensity, place, method, delivery, and media of instruction to change to reflect the learning outcomes, the needs of the student, the subject and course requirements and the judgment of the teacher (Arbaugh, 2009; Arbaugh, 2007; Garrison & Vaughan, 2008; Caladine, 2001).

In contrast to objectivist (traditional instructional design models) flexible delivery methods draw on a constructivist model of learning (Garrison & Vaughan, 2008). Constructivists believe that the student constructs knowledge by actively participating in the learning process. The constructivist approach values collaboration, learner autonomy, reflectivity and active engagement (Moallem, 2001; Eggen et al., 2001). Constructivist learning is based on active participation in problem-solving and critical thinking regarding a learning activity which students find relevant and engaging. Students construct their own knowledge by testing ideas and approaches based on their prior knowledge and experience, applying these to a new situation, and integrating the new knowledge gained with pre-existing intellectual constructs (Eggen et. al., 2001).

Consistent with Garrison and Archer (2000) many researchers believe the ideal learning experience is a collaborative, constructivist process that includes social interaction and peer learning, and meaning is not constructed in isolation (Garrison & Vaughan, 2008; Arbaugh, 2007; Arbaugh, 2009). The emphasis is on inquiry processes, as presented in Figure 2.1 that ensure core concepts are constructed by students and assimilated in a deep and meaningful manner (Jonassen, Peck & Wilson, 1999; Ladyshevsky, 2004).

Although reliance on technology is not strictly a pre-requisite for flexible delivery, it is generally seen as an essential element in providing the means to support student-centred learning and improving the quality of education (Review of

Higher Education Report, 2008; Drennan et al., 2005; Hobbs & Judge, 1992; McComb, 1994; Santoro, 1995). It does seem that student familiarity and comfort levels with using technology increases over the duration of study, resulting in student discussions of increasing complexity and quality (Arbaugh et. al., 2009). Learning through the flexible delivery method is likely to be more cumulative so student satisfaction with subsequent online learning experiences will increase (Arbaugh & Rau, 2007). However, Arbaugh and Rau (2007) note that the effectiveness of student-student interaction may be negatively affected by a large class size making it challenging for students to read and respond to large numbers of postings thereby reducing their satisfaction with the flexible delivery method.

Flexible delivery and traditional face-to-face delivery methods have been examined through the lens of equivalency theory which focuses on the importance of providing teaching and assessment methods of equal value to students who are in fundamentally different learning environments (Eggen et. al., 2001). In one study, (Lapsley, Kulik, Moody and Arbaugh, 2008, cited in Arbaugh et al., 2009) researchers investigated the validity of equivalency theory in two human resource management subjects: one taught by the flexible delivery method and the other by a traditional face-to-face method. Commonalities between the subjects included same term, same professor, and identical assignments/tests in the same order. The curricula for the courses were essentially identical, except that the curriculum for the flexible delivery subject contained information on how to access the subject/unit management system, Blackboard™, and listed deadlines for completing each online quiz or problem. It was found that when equal experiences (assignments, lectures and activities) were provided through both delivery methods, students in the flexible delivery method courses performed better than the classroom-based students (Lapsley et. al., 2008).

Some research suggests that flexible delivery methods can be impersonal which may cause lower levels of satisfaction with the method. In recent research mixed course evaluations note a key failing of flexible delivery is a lack of face-to-face interaction with both teachers and students (Selim, 2007; Nemanich, Banks & Vera, 2009). This could be addressed through increasing interaction by students through the use of experiential exercises to increase interaction (Ronchetti, 2010; Arbaugh, 2009; Haytoko, 2001 cited in Bonk & Graham, 2006).

Other challenges identified with flexible delivery methods are that they can contribute to student procrastination and non-completion (Tattersall et al., 2006), and ‘undeniably there is evidence from the field that flexible delivery methods can be anything but flexible, constraining students in ways they had not imagined, and causing untold frustrations’ (Willems (2004: 429). Other possible ‘inflexibilities’ that may impact on the effectiveness of flexible delivery methods have also been identified. For example, flexible delivery can create time and pace dependence as students become increasingly tethered to equipment, places, and schedules (Willems, 2004). In an ethnographic case study conducted between 2000 – 2003 (Willems, 2004), data collected mainly from those studying in rural and isolated locations and low socio-economic backgrounds, revealed a wide gap between the espoused time, place and pace independence of flexible delivery and the actual experiences of the students. These experiences were considered not to have been positive and in some cases, severely impacted on the achievement of successful learning outcomes and the perceived richness of the learning experience. A lack of formal instructional design process is more obvious in flexible delivery methods (Bonk & Graham, 2006). Without the immediate opportunity for eye contact, body language, or verbal feedback, teachers cannot easily ascertain if a student understands instructions or content unless the level of understanding is

communicated through the use of social media such as emails, Elluminate or Collaborate sessions or 'Wimba' an Adobe meeting room. As a result participants may leave units confused, unsatisfied or without the training and development they need. Teachers may never be aware of the reasons behind these feelings (Bonk & Graham, 2006).

The research undertaken by Lapsley et. al., (2008) is included in an extensive literature review conducted by Arbaugh et al., (2009) of flexible delivery methods in business disciplines. The intent of the review was to provide an overview assessment of flexible delivery and identify opportunities for meaningful research. The review focused on academic research articles that examined delivery methods where course content and participant interaction was managed at least partially online (2009:71). Based on the results from their literature review Arbaugh et al., (2009) suggest generally that flexible delivery methods are at least comparable to traditional delivery methods 'in achieving desired learning outcomes, while there is divergence in findings of comparisons of other course aspects' (2009: 71).

2.5 HYBRID FLEXIBLE DELIVERY

Hybrid flexible delivery has been proposed to enhance student learning and engagement, improve access and flexibility and address organisational and institutional imperatives in tertiary education (De George-Walker & Keeffe, 2010; Gururajan & Danaher, 2010). Hybrid flexible delivery is a way of combining electronic delivery of content and learning aids via on-line and CD-ROM with traditional face-to-face lectures/workshops and communication tools. Hybrid flexible delivery aims to ensure learning occurs both in the classroom and online, and where the online component becomes a natural extension of traditional classroom delivery (Bonk & Graham, 2006; Collis & Moonen, 2001 cited in Rovai & Jordan, 2004). It is also defined as an integration of traditional face-to-face and

online learning approaches to instruction (Macdonald, 2008). Hybrid flexible delivery may also be referred to as the use of a virtual learning system (VLS) as an information system that facilitates e-learning to support face-to-face teaching and self-managed learning in the virtual learning and education environment (VLE) (Lin, 2012).

Using a mix of different didactic methods (expository presentations, discovery learning and co-operative learning) and delivery formats (personal communication, electronic and print, publishing and broadcasting), hybrid flexible delivery can fit with a range of learning styles, learner convenience and the best practices of instructional design. This enables subject unit ‘developers’ to create learning experiences that engage the student and maximize learning retention (Bonk & Graham, 2006:29; Kerres & DeWitt, 2003: 103 cited in Bliuc; Goodyear and Ellis, 2007).

Oliver and Trigwell (2005) suggest that hybrid flexible delivery requires a refocus from teacher to student, from content to experience and from technologies to pedagogies. This notion of hybrid flexible delivery is supported by others who suggest that with the learner-centred (or learner-centric) and student-determining focus of hybrid flexible delivery, the choices of what and when to ‘blend’ will increasingly be manipulated and controlled by students rather than teachers (De George-Walker & Keeffe, 2010: 2). Massie (2006:25) argues that this approach to hybrid flexible delivery is not new and learners have naturally added together learning elements: ‘They add what is missing, they mix it with what they need, and they subtract what is not valuable. They socialize it. They find context. And they transform training and instruction into learning’.

The literature suggests there is considerable intuitive appeal in the idea of hybrid flexible delivery, based on its integration of the strengths of synchronous (face-to-face) and asynchronous (text-based on-line and CD-ROM) delivery of learning activities (Garrison et al., 2004) and some studies show that learner attitude towards hybrid flexible delivery tends to be very positive (Yudko, Hirokawa & Chi, 2008).

There is some evidence in tertiary education that hybrid flexible delivery methods increase the level of active learning, peer-to-peer learning, the use of learner-centred strategies and can generate more substantive discussions which contribute to deeper learning (Collis, Bruijstens & van der Veen 2003; Morgan, 2002; Smelser, 2002 cited in Bonk & Graham, 2006). The use of a diversity of media in hybrid flexible delivery can lead to better task outcomes, improved learning performance and increased student engagement (Andrewartha & Wilmot, 2001; Nemanich, Banks & Vera, 2009; Zhao, Lei, Yan, Lai and Tan, 2005).

What makes hybrid flexible delivery particularly effective is that it facilitates the creation of a Community of Inquiry (CoI) (Garrison et al., 2004; Akyol & Garrison, 2011), which can provide the conditions for free and open dialogue, critical debate, negotiation and agreement. Hybrid flexible delivery facilitates these conditions by adding important reflexive elements combined with multiple forms of communication to meet specific learning requirements. For example, at the beginning of a subject/unit it may be advantageous to use a traditional face-to-face delivery method to start the process of building community. In contrast, discussing a complex issue, that requires time for reflection, may be better accomplished through an asynchronous on-line discussion forum (Garrison et al., 2004).

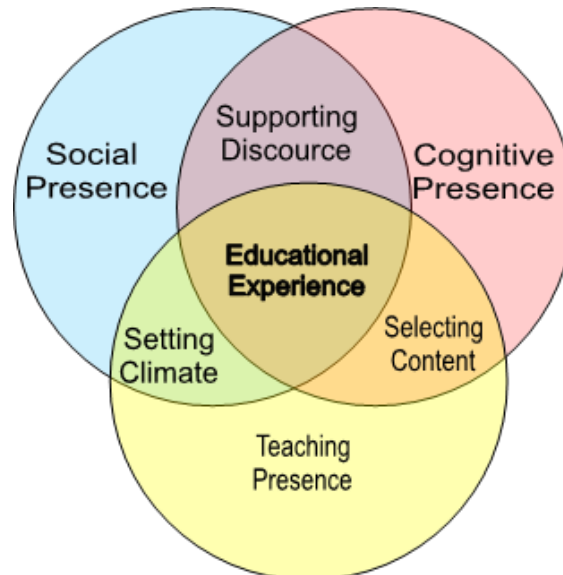
Communities of inquiry (CoI) comprise three elements: social, cognitive and teaching presence (Garrison et al., 2004:98). A sense of belonging and community by

the students must be on a social and cognitive level if the goal of achieving higher levels of learning is to be achieved and sustained (Garrison et al., 2004). The formal categories of social presence are open communication, cohesive responses and affective/personal connections. Cognitive presence maps the cyclical inquiry pattern of learning through reflection and conceptualisation to action and on to further experience. Teaching presence establishes the curriculum, teaching methods and also moderates, guides and focuses discourse and tasks (Garrison & Vaughan, 2008).

For hybrid flexible delivery to be effective it requires teaching presence to manage the environment and focus and facilitate the student learning experience. Effective teaching presence can bring about a shift from students assimilating information to constructing meaning and confirming understanding in a community of inquiry (Garrison et al., 2004). Arbaugh and Rau (2007), in a study of web-based courses, confirmed the validity of the CoI in facilitating student engagement and learning. They found that student interaction is significantly associated with perceived learning and effective hybrid flexible delivery experiences are a function of participants' social presence, cognitive presence and teaching presence that the teacher establishes through the facilitation of student discourse. Additionally the 'course design and organisation' element of teaching presence was found to be a significant predictor of delivery method satisfaction in the hybrid flexible delivery environment (Arbaugh & Rau, 2007:80).

Figure 2.1 depicts the community of inquiry framework.

Figure 2.1: Community of Inquiry Framework



Source: Garrison et al., 2004:98; Garrison & Vaughan, 2008: 18.

Evidence suggests that hybrid flexible delivery methods produce a stronger sense of community among students than either traditional face-to-face or flexible delivery methods with a sense of community considered as equivalent to a felt sense of real, meaningful connection and interaction between students their peers and teachers (Bliuc et al., 2007; Rovai & Jordan, 2004). Hybrid flexible delivery methods enable a wide range of opportunities for students to interact with each other and with their teacher. These interactions can result in increased socialisation, a stronger sense of being connected to each other and increased construction of knowledge through discourse, therefore providing stronger feelings that the learning outcomes are being satisfied through community 'membership' (Rovai & Jordan, 2004). Learners can form more long-lasting collaboration with their fellow students and rely on each other after the formal structured learning experience is over (Bonk & Graham, 2006).

The use of ‘conversational technologies’ in hybrid flexible delivery can also have a positive impact because secondary-oral communication techniques can augment the print approach. In other words, while a student can still be presented with material (in different formats) using the print model as the primary delivery method, the introduction of secondary-oral communication techniques can improve the overall learning experience. Conversational technologies encompass a wide range of systems and software, including e-mail, instant messaging, Web pages, discussion forums, video and audio content/streaming, podcasts, wikis, and Weblogs. By giving students the opportunity to work and learn collaboratively, these new technologies have enabled the blending of flexible delivery into an integrated set of productive learning spaces (Xu, 2008: 157; Ferris & Wilder, 2006; Wallace, 2005).

Implementation of hybrid flexible delivery entails significant complex challenges arising from its virtually limitless design possibilities and applicability to many different contexts (Garrison et al., 2004). In terms of curriculum design, this form of delivery requires a fundamental re-conceptualisation and re-organisation of the teaching and learning dynamic, starting with various specific contextual needs and contingencies (such as developmental level and resources). In this respect, no two hybrid flexible delivery methods are identical (Arbaugh, 2000). According to De George-Walker and Keefe (2010:3) this means a shift for teachers to consider the whole course and a ‘weaving through’ rather than ‘tacking on’ of hybrid flexible delivery approaches as was undertaken in the Unit which is the focus of this research. The design of hybrid flexible delivery needs to accommodate a wide variety of users via multiple means of representation, expression and engagement (Rose & Wasson, 2008). This design can be operationalized using four hybrid delivery learning dimensions as noted by Verkroost et. al., (2008): (1) structured

versus unstructured, (2) individual versus group learning, (3) face-to-face versus distance and (4) teacher-led versus student self-direction.

Research has found students in the hybrid flexible delivery courses report higher levels of learning, but students in traditional face-to-face courses indicate face-to-face delivery is clearer and easier to understand (Chen & Jones, 2007). Jones and Chen (2008) subsequently published a follow-up study which found that students in the hybrid flexible delivery units reported better access to and contact with the teacher, but were concerned about how the teacher presented on-line material and the effectiveness of student-student on-line meetings. Other challenges with hybrid flexible delivery include managing class size and promoting student discovery (Brower, 2003 cited in Arbaugh et. al., 2009). Another issue of note and previously discussed, is trust and the importance of social presence particularly in the early stages of a unit offered by hybrid flexible delivery method. The level of trust and social presence may contribute to increased levels of student stress (Allan & Lawless, 2003 cited in Arbaugh, 2009).

Hybrid flexible delivery integrates face-to-face and flexible delivery and can support and encourage contributions from students. It may contribute to fostering a team approach to teaching and learning, however to be effective hybrid flexible delivery requires the teacher to incorporate a mix of different didactic methods, delivery formats and an appropriate combination of face-to-face and asynchronous learning activities (Lim, Lee & Nam, 2007). Research suggests that hybrid flexible delivery can facilitate the development of a community of inquiry which can support meaningful and substantive discussions and strong relationships between students and teachers and students. It is also recognised that effective hybrid flexible delivery requires responding to significant design and implementation complexities.

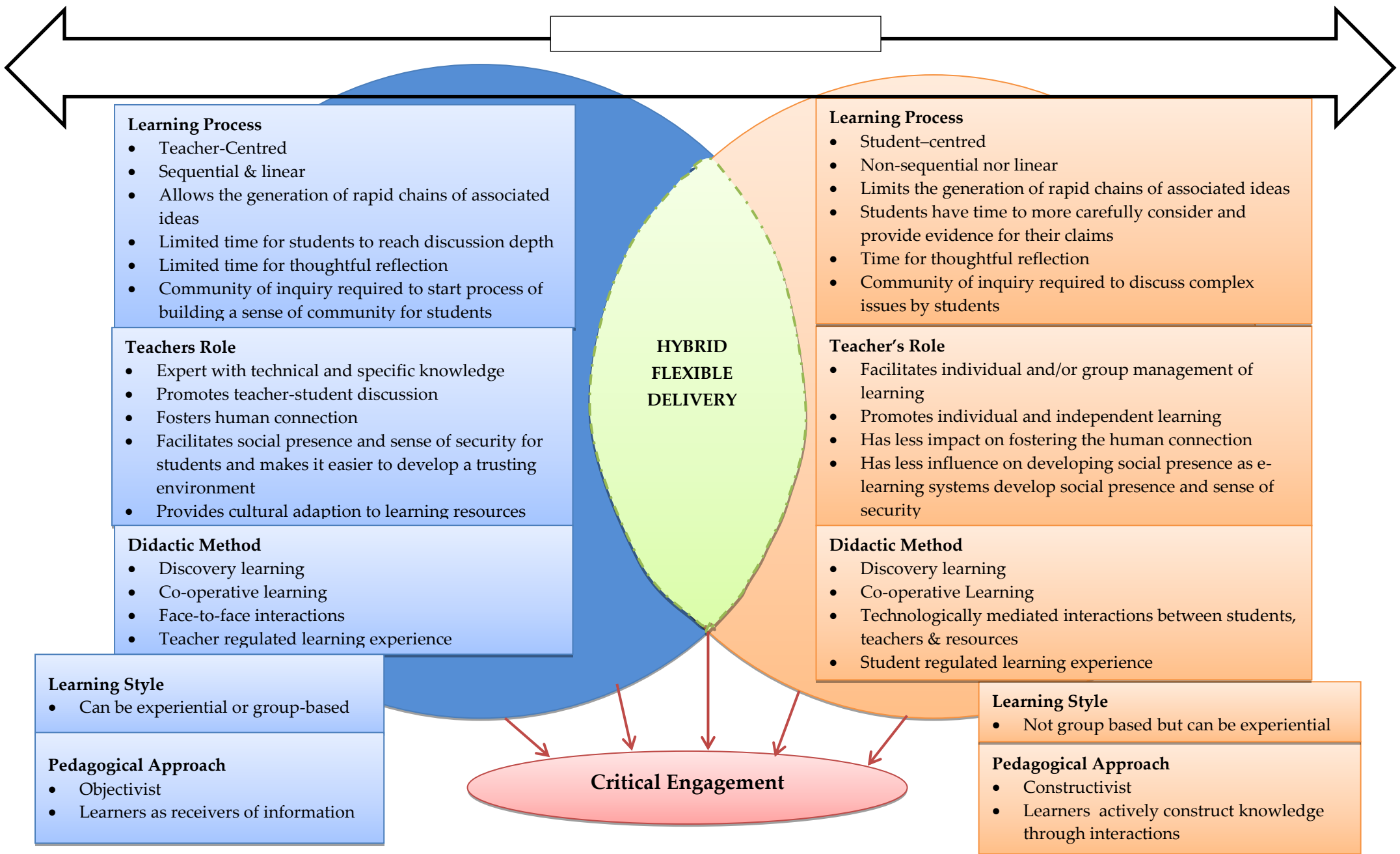
In summary, educational designers and teachers need to consider a number of factors when determining appropriate delivery methods. They need to understand how students learn, how they perceive and process information and how they apply information to new situations (Zapalska & Broznik, 2007). Effective delivery methods need to be consistent with preferred learning styles, and need to consider students' cultural background and socio-economic differences. It is also important to keep in mind that even if a specific student learns best in a certain way, he or she should be exposed to a variety of learning experiences to become a more versatile learner (Zapalska & Broznik, 2007).

2.6 COMPARING TRADITIONAL FACE-TO-FACE, FLEXIBLE AND HYBRID DELIVERY METHODS

Figure 2.2 shows a summary of the key characteristics of the traditional face-to-face, and flexible delivery methods in tertiary education based on the literature reviewed. The diagram depicts hybrid flexible delivery method as a convergence or blended mix with the traditional face-to-face and flexible delivery methods which reflects the approach to hybrid flexible delivery adopted by the Unit under consideration in this research.

The intersection of the two archetypes shows where the hybrid flexible delivery method emerges. Course factors (curriculum), course experience, student success (education, career), and individual characteristics (demographics, learning styles, skills and motivation such as immediate goals, aspirations and attitude towards lifelong learning), may all have an impact on the effectiveness of hybrid flexible delivery and the level of critical engagement.

Figure 2.2 : Key Characteristics of Traditional Face-to-Face, Flexible and Hybrid Delivery Methods in Tertiary Education



Given the trend towards hybrid flexible delivery it is important to understand the extent students are critically engaged by various delivery methods and what variables affect levels of critical engagement particularly as there is limited understanding of how specific factors associated with delivery methods affect the level of critical engagement experienced by students (Arbaugh, 2000; Kirkpatrick & McLaughlin, 2000; Oliver and Omari, 2001, Dearn, 1998, Nunan et. al., 2000, Drennan et. al., 2005; Arbaugh, 2009).

2.7 CRITICAL ENGAGEMENT

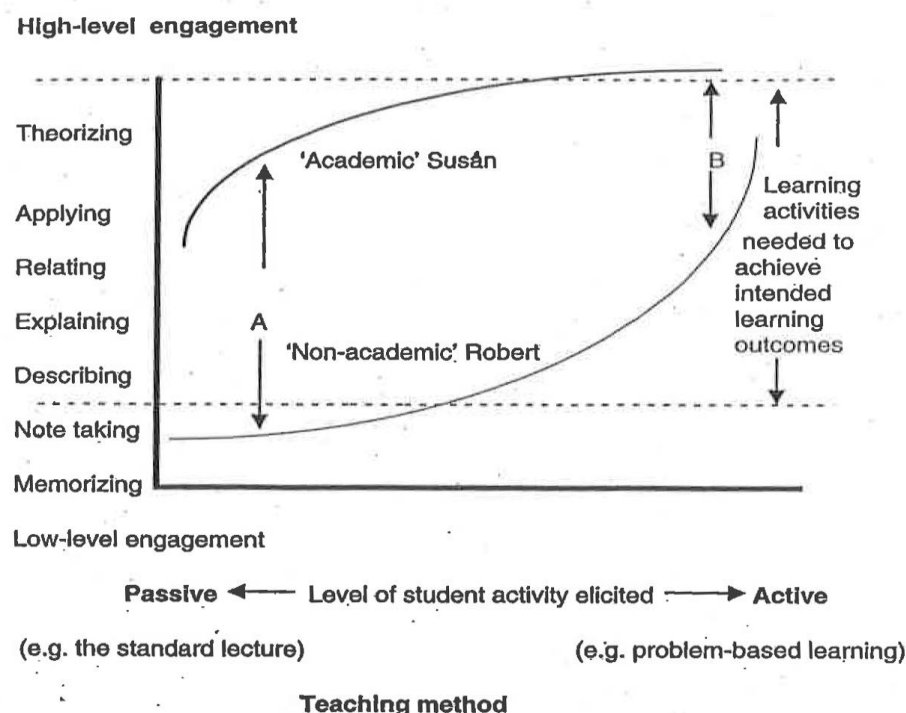
There is ongoing debate in the literature about what is actually meant by critical engagement, how it is best measured, why it is important in the context of learning, and which delivery methods best facilitate it. One description suggests critical engagement is considered to be the extent to which a student performs a range of educational activities that research has shown as likely to lead to high quality learning (Coates, 2005). These activities may include active learning, involvement in ‘enriching education experiences’, seeking guidance from teachers, or working collaboratively with other students (Coates, 2005:26). However, as noted by Hart (2002) critical engagement may be difficult to achieve as many students require a relationship or sense of belonging before they become effectively engaged and this can be particularly problematic in a unit that is heavily content laden.

The model presented by Biggs and Tang (2007) (see Figure 2.3) suggests that there are opportunities for teachers to lessen the differences between students to facilitate critical engagement, by reflecting on the role of three factors. These factors are:

1. The level of learning activity required to achieve the intended learning outcomes in relation to particular content and thinking (ranging from 'describing' to 'theorising');
2. The degree of learning-related activity that a teaching method is likely to stimulate (passive to active);
3. The academic orientation of students (academic or non-academic).

In essence, Biggs and Tang (2007) conceptualise critical engagement as a function of two factors: the level of intellectual complexity involved in the learning activity and the degree of effort required to engage in the learning activity. To facilitate a higher level of critical engagement the level of student activity, for academic and non-academic students, moves from passive to active to achieve the intended learning outcomes through activities such as problem-based learning. This is coupled with students developing the skills to work at more complex levels of thinking such as describing, explaining, relating, applying and theorising. Figure 2.3 depicts the relationship between engagement and the teaching method employed.

Figure 2.3: The relationship between engagement and the teaching method



Source: Biggs & Tang (2007).

It is clear from this model that to facilitate critical engagement more personalised and individualised methods of delivery must be negotiated with students that match individual student needs and academic orientation (Holley and Oliver, 2010). Student-centred delivery methods that encourage engagement, and course structures and grading or assessment approaches that encourage interaction must be developed (Brower, 2003). Leask (2011) also comments on assessment in relation to critical engagement, suggesting that assessments shouldn't be heavily dependent on students' ability to remember but should focus on the application of new concepts (Leask, 2011).

Other conceptual approaches have also focused on the level of complexity that characterises learning activities in discussion of how to achieve critical engagement (Biggs and Tang, 2007). For example, critical engagement has been

conceived as a process of having students approach course materials in a questioning fashion, getting students to ask whether theory is relevant and useful to the student's (or manager's or case) context; and if so, then using the theory to challenge and extend the ways of thinking about the context; or in the case of a manager, their professional practice (Cameron, 2009; Drennan et. al., 2005:337). Indicators that this process has taken place include if students demonstrate both an understanding of a concept/theory and are able to identify and explain issues that have arisen in a given situation, as well as suggest new ways of thinking about, and where appropriate, changing professional and organisational management practice (Cameron, 2009). This concept of critical engagement is supported by Bunnell et. al., (2008) who suggest critical engagement is about evaluating ideas or practice and considering how concepts can be applied to their reality.

Literature also suggests that critical engagement requires students to recall a key concept/model which has 'struck them as being important in some way' (Bunnell et. al., 2008:8). It requires students to describe the model, identify how and where it might be used with examples, and reflect on how the model selected has changed their thinking and approach to being a student or a manager. Students are encouraged to ask 'Why was this said? What does this mean? In what context was it said?' (Moustakim, 2010:212). This idea of recall, identification, application of a concept/model and reflection relates to research that suggests critical engagement is facilitated when students engage in experiential exercises and when they have the opportunity to discuss or collaborate with peers to develop a deeper understanding of new concepts (Arbaugh, 2009; Simkin and Kuechler, 2005; Leask, 2011).

Another useful perspective on how critical engagement might be considered has been provided by the practice-based Professional Learning Centre at the UK Open University's Business School (Cameron, 2009). As a result of examining

teaching practice at the Open University Business School (OUBS) a number of strategies were identified to encourage critical engagement. Assessment should be used as a basis for reflection on the meaning of models and concepts and the implications for personal professional practice' (Cameron, 2009:3). Furthermore, theory needs to be presented in a complete and not distilled form to encourage a critical approach by students (Cameron, 2009) and students need encouragement to explore power, control and inequalities in theories, concepts and ideas (Ford et. al., 2010). Students should be required to discuss the idea of engagement and explore course purposes and assumptions in early tutorials with a more critical approach to be adopted in online discussion (Cameron, 2009:11). It is also noted that even when students understand the intended learning process, for most students critical engagement requires encouragement, practice and feedback to develop the required skills (Bunnell, et. al., 2008).

The OUBS prepared documents from evaluating their teaching practice to improve critical engagement. Key points from this documentation requires students to:

- Apply an idea or model to a concrete situation to help them understand the situation better and to create options and where possible take action;
- Identify where a model works and its limitations;
- Distinguish between research based models, thoughts only models and be able to critique the soundness of any research based model;
- Recognise that a model may still offer useful ways of thinking about a scenario irrespective of any research labels; recognise that many models are constructs and that they are not presented as empirical realities;

- Understand the difference between correlation and cause and the nature of experimental method in social science and embed reflective thinking, before, during and after practice in order to improve management thinking and action to facilitate further reflection (Cameron, 2009).

Students also bring their own life experiences to academic study and arguably those better prepared by work and previous positive educational advantage will more easily match the learning needs of a unit and will be more critically engaged (Holley & Oliver, 2010). A number of contemporary studies have produced evidence for associations between personality, academic achievement and critical engagement (Frederickson & Furnham, 2005; Chamorro-Premuzic & Furnham, 2003 cited in Sheard, 2009). In particular researchers have consistently reported the positive association between conscientiousness, one of the Big Five Personality Factors, and critical engagement (Costa & McCrae, 1992; Chamorro-Premuzic & Furnham, 2003). Students who score high in conscientiousness are typically identified as being competent, hard-working and achievement oriented and likely to be critically engaged (Sheard, 2009).

In summary each perspective of the concept of critical engagement reflects a focus on the student achieving quality outcomes through a variety of enriching learning experiences of intellectual complexity. These learning experiences should encourage students to demonstrate an understanding of a concept/theory, explain issues that have arisen in a given situation, offer new ways of thinking and where appropriate change their professional or organisational practice. Critical engagement requires the teacher to identify appropriate learning activities and teaching methods whilst considering student learning styles and academic orientation. It is recognised that many students require a relationship or sense of belonging before they become effectively engaged in the learning process.

There are a number of definitions of critical engagement. For the purpose of this research critical engagement has been operationalised to mean the learning outcomes embedded in the unit design and required for students to achieve the specified unit learning outcomes.

2.8 BLOOM'S TAXONOMY AND ITS RELATIONSHIP TO CRITICAL ENGAGEMENT

Bloom's Taxonomy is a long established, well accepted framework of describing the complexity of learning activities that are needed for critical engagement. Bloom's Taxonomy is a more detailed take on the list of activities Biggs and Tang (2007) use in their model and has come to be '...synonymous with a classification of learning objectives within education, and is considered to be a foundational and essential element within the education community' (Fletcher et. al., 2010). It is often used in the development of curricula concerned with encouraging and developing the critical thinking capacities of students through the design and sequencing of learning activities. The rationale for its use being that students who are more critical are better able to bring about changes in their current and future practices as managers. (Liu & Yang, 2012; De George-Walker & Keeffe, 2010; Forehand, 2005). Because of its widespread use, Bloom's Taxonomy is being used as the lens for considering the extent to which learning activities produce critical engagement in this study.

Bloom's taxonomy provides an interpretive framework for understanding the relationships between the key intellectual skills valued in adult learning and which reflect critical engagement (Cameron, 2009). It outlines a set of behaviours that represent self-managed learning and self-responsibility (Cameron, 2009; Drennan et. al., 2005; Athanassiou et al., 2003 & Krathwohl, 2002) and uses a common language of educational objectives for classifying statements what might be expected or intended for students to learn (Krathwohl, 2002). Under Bloom's Taxonomy critical

engagement is most likely to occur when students work at the more complex levels of thinking, and as previously discussed in the model by Biggs and Tang (2007), where they are relating course material to practice through application, analysis, synthesis, evaluation and creation (Krathwohl, 2002). For critical engagement to occur it is important that each level of Bloom's taxonomy of learning activity is 'embedded' within the learning experience to facilitate cognitive skills development and critical engagement. That is Bloom's taxonomy should be use prospectively in unit design. A review of management and education literature indicates there is a growing awareness of the potential usefulness and richness in curriculum design and delivery and assessment and methods that use of Bloom's Taxonomy offers. It is acknowledged though that the original version of Bloom's Taxonomy had some methodological issues and current research and theory on the nature of knowledge and cognition needed to be incorporated (Krathwohl, 2002; Nentl et al., 2008).

Since its initial development, research has led to further development and revision of Bloom's Taxonomy (Anderson & Krathwohl, 2001; Simkin & Kuechler, 2005). The revised taxonomy is presented below in Figure 2.4.

Figure 2.4: Bloom's Taxonomy Revised

Type of Cognitive Process						
Type of Knowledge	Remember	Understand	Apply	Analyse	Evaluate	Create
Factual	Recognise Facts					
Conceptual		Interpreting and inferring facts				
Procedural	Recognise procedures			Executing and implementing procedures		
Metacognitive						Planning Strategies

Source: Simkin, M.G., & Kuechler, W.L. 2005. Multiple-Choice Tests and Student Understanding: What is the Connection? *Decision Sciences Journal of Innovative Education*. 3 (1)

Like the original taxonomy, the revision is a hierarchy in the sense the six major categories of the cognitive process dimension are believed to differ in their complexity with 'remember' being less complex than 'apply' and so on. One of the things that clearly differentiates the new model from the original, is that it lays out components clearly so they can be considered and used, and so cognitive process as related to chosen instructional tasks, can be easily documented and tracked. This feature has the potential to make teacher assessment and student assessment easier or clearer as usage patterns emerge (Krathwohl, 2002). The revised version is built around the levels of knowledge indicated in Bloom's original framework – factual, conceptual and procedural with the addition of 'metacognition' to the array of knowledge types. Using a simple cross impact grid or table (as shown in Figure 2.4) a teacher can match easily activities and learning outcomes to the types of knowledge and to the cognitive processes as well. It is a useful tool to use in assessing how instruction is actually impacting levels of learning. Teachers can also use it to track which levels of cognition they are requiring from students as well as which dimensions of knowledge (Krathwohl, 2002).

There is evidence that students can 'know' and think about a subject differently, and Bloom created this framework for understanding the learning activities of students. More learning is retained when a student works at the more complex levels of the taxonomy but at the lowest levels of the taxonomy, the content that is learnt is simply understood (Bunnell et al., 2009). In tertiary education, higher level thinking is important and relating of learning to practice, through application, analysis, synthesis, evaluation and creation is what students are expected to do to achieve intended learning outcomes.

By using the taxonomy table, an analysis of the expected learning outcomes in a course of study provides, among other things, an indication of the extent to which more complex kinds of knowledge and cognition processes are involved (Anderson et al., 2001; Krathwohl, 2002). Using Bloom's taxonomy in course design can help reinforce aspects of higher order thinking, which are critical to the quality of life and careers students will build for themselves. The aspects of higher order thinking addressed in the taxonomy are also fundamental to the development of managerial skills (Athanassiou et al., 2003).

According to the research conducted by Athanassiou et al., (2003) the use of Bloom's taxonomy in curriculum design for management classes resulted in the development of a meta-cognitive framework for learning. This proved useful in building their students' critical thinking and synthesis skills and facilitating students taking responsibility for their own learning. The use of the taxonomy helped create a learning approach and made students more aware and take control of their own cognitive development (Athanassiou et al., 2003).

The research suggests students responded positively to the use of Bloom's taxonomy for cognitive development and evaluation of performance. It assisted in

understanding what was missing from their work and where learning opportunities were with increased specificity, because of the ‘scaffolding effect of the taxonomy’ (Athanassiou, 2003:549). As one student commented (2003:549) ‘It’s the key to letting the professors know that I get the ideas and am thinking.’

In summary, Bloom’s taxonomy has been found to be a useful way of operationalising the relationships between key cognitive skills valued in education and learning (Anderson et al. cited in Simkin & Kuechler, 2005). The complexity of these cognitive skill relationships increases as learners move along a learning continuum (from simple memory to having the capacity to create their knowledge) as shown in Figure 2.4. For the purposes of this research, and in line with the concept of critical engagement, Bloom’s Taxonomy will be used as the lens for understanding the extent to which learning activities produce critical engagement in this study. By examining the elements of a unit, such as delivery methods and learning outcomes, through the Bloom’s ‘lens’, the degree that each level of Bloom’s taxonomy is ‘embedded’ within the unit can be identified. Figure 2.5 shows the correlation between the learning outcomes and the teaching and assessment methods used in the unit which is the research focus, and the corresponding cognitive processes of Bloom’s Taxonomy. There is evidence that Bloom’s Taxonomy was considered prospectively in the design of the unit under consideration in this study.

Figure 2.5 Correlation between the learning outcomes and the teaching and assessment methods used in the Unit which is the focus of the research and the corresponding cognitive processes of Bloom's Taxonomy.

Lectures		
Tutorials		
Case Study Workshops		
CD Learning Resources		
Additional Readings and handouts		
In-class multiple choice test		
Case study essay assignment		
Prescribed Textbook		
Lecturer's Teaching Style		
Learning outcome 1	Demonstrate knowledge and understanding of the main theories, concepts and frameworks relating to strategy in organisations.	Remember + Understand + Apply
Learning outcome 2	Draw conclusions from strategy data.	Evaluate + Create
Learning outcome 3	Apply this knowledge to case studies in terms of the complexity and uncertainty facing business organisations.	Apply + Analyse
Learning outcome 4	Conceptualise and articulate the usefulness and relevance of existing theories, concepts and frameworks in dealing with issues in strategic management.	Remember + Understand + Apply + Evaluate
Learning outcome 5	Critically evaluate the usefulness and relevance of existing theories and frameworks in dealing with issues in strategic management.	Remember + Understand + Apply + Evaluate

In summary, the literature has revealed a number of research issues. There is a changing social context in tertiary education and a shift towards hybrid flexible delivery methods. It is important to ensure that critical engagement is achieved with this shift and quality learning experiences provided for students. The literature indicates various definitions of critical engagement and how it can be measured. There are a broad range of internal and external factors that research has shown impact on critical engagement specifically factors such as individual personality traits, academic orientation; a student's preferred learning style; a student's positive

psychological attributes (psychological capital); the perceived relevance and usefulness of course materials; a student's life experiences; the teacher's role; didactic method and pedagogical approach used.

Bloom's Taxonomy is one way of operationalising the relationships between key cognitive skills valued in learning and required to facilitate critical engagement. With the shift to hybrid flexible delivery it is important to verify the value of this delivery and assessment method and its contribution to providing a quality learning experience and critical engagement and to identify the factors that contribute to the appropriateness of selected delivery method.

For the purpose of this research students' perception of their learning engagement is being measured; that is their success in achieving 'critical engagement' as the learning outcome embedded in the Unit design and required to achieve the specified unit learning outcomes. Student's perception of their learning engagement is also measured in three additional ways. Firstly, by changes in confidence levels in achieving the unit learning outcomes at pre-unit and post-unit. Secondly, by the change in their level of agreement, at pre-unit and post-unit, regarding the degree the teaching and assessment methods used contribute to learning. Thirdly, by the degree of change regarding whether the unit teaching and assessment methods assist in developing high level academic, critical reasoning skills and useful practical work-related skills.

CHAPTER 3

METHODOLOGY

Chapter 3: Methodology

3.1 INTRODUCTION

All research is based on some ontological and epistemological underlying assumptions about what constitutes ‘valid’ research and which research methods are appropriate (Myers, 1997). A researcher must be aware of his or her own beliefs about physical and social reality (ontology), and his or her own beliefs about the way knowledge is constructed and evaluated (epistemology) (Remenyi & Williams, 1996). As a researcher seeking to address a research proposition relating to the impact of hybrid delivery methods on the level of critical engagement in tertiary education, it is important that the ontological perspective of this research be recognised as subjective in nature, and that the researcher has beliefs about physical and social reality.

A basic ontological assumption in this research is that ‘reality’ cannot be understood independent of the people that construct and make sense of that reality (Orlikowski & Baroudi, 1991). Subjective research attempts to understand a situation by including the researcher and the subject in the context of the situation (Olson, 1995). Ontological considerations concern ‘reality’. Guba and Lincoln (1994) phrase the question that researchers must ask, ‘what is the form and nature of reality, and therefore what is there that can be known about it?’ (1994:108).

Epistemological assumptions concern how knowledge is gained and communicated in research and define the way data is collected and given meaning (Hirschheim & Klein, 1989). These assumptions shape how researchers understand the world and how they communicate this knowledge to others (Burrell & Morgan, 1979). Guba and Lincoln assert that researchers must understand ‘what is the nature between the knower or would-be knower and what can be known?’ (1994:108).

In this research a postpositivist approach was adopted. In terms of methodology postpositivism emphasis is placed on 'critical multiplism' (Guba & Lincoln, 1994:110) which is a refurbished version of triangulation as a way of falsifying hypotheses. The methodology aims:

To undertake inquiry in natural settings collecting more situational information, and reintroducing discovery as an element of inquiry and soliciting 'emic viewpoints' to assist in determining the meanings and purposes that people ascribe to their actions as well as to contribute to grounded theory (Guba & Lincoln, 1994:110).

Ultimately, this research is about humans, each with their own unique preferences for learning and beliefs about how the teaching and assessment methods employed in a specific unit have facilitated the level of critical engagement.

As discussed in 1.3 for the purpose of this research students' perception of their learning engagement is being measured; that is their success in achieving 'critical engagement' as the learning outcome embedded in the Unit design and required to achieve the specified unit learning outcomes. Student's perception of their learning engagement is also measured by the changes in their confidence levels in achieving the unit learning outcomes at pre-unit and post-unit; by the change in their level of agreement, at pre-unit and post-unit, regarding the degree the teaching and assessment methods used contribute to learning. Students' perception of learning engagement is also measured by the degree of change regarding whether the unit teaching and assessment methods assist in developing high level academic, critical reasoning skills and useful practical work-related skills. In summary the research focus is to explore:

To what extent are students critically engaged by hybrid flexible delivery?

What aspects of hybrid flexible delivery most affect the level of critical engagement?

Does the level of critical engagement differ according to age, gender, first language, year of enrolment or the level of student prior achievement?

3.2 CONTEXT

The context for the study was BMA799 a postgraduate unit which aims to develop an understanding of the key issues in strategic management. The unit seeks to provide an understanding of the major strategic options available to an organisation and how to evaluate and choose between these options. It aims to develop students understanding of the principles and activities of strategic management. The Unit Outline is attached as Appendix 28.

The study was conducted by the School of Management, in the Faculty of Business and the administration of the survey monitored through oversight by the Chief Investigator and Co-Investigators. Hard copy data was stored in a secured filing cabinet. Electronic data was stored on a password-protected computer. All data collected will be destroyed by shredding or deleted permanently from the computer hard-drive five years' after publication. All reasonable precautions were taken to ensure that respondents were in no way directly harmed or adversely affected as a result of their participation in this research (Bryman & Bell, 2007: 133).

The unit BMA799 was delivered using a variety of teaching and assessment methods to achieve the learning outcomes. The unit was built around reading, reflective listening and note taking, discussion and writing good prose. The resources included the Lecturer-in-Charge; the tutor; two textbooks (a theory text and a journalistic account of two businesses which were analysed using the strategic

concepts to explain the strategic moves outlined in the text); tutorials; strategy (case study) workshops and CD-ROM.

The tutorial program was conducted face-to-face and focused on discussing an article each week in relation to theory outlined in the theoretical material. The strategy (case study) workshops were offered face-to-face. They were conducted across five weeks and explored specific organisations. The lectures were conducted weekly, face-to-face by the Lecturer-in-Charge and provided an overview of key aspects of theory from the core chapters of the theory text.

The teaching and assessment methods included a CD-ROM of learning resources which provided an introduction to the unit, reinforced the importance of the textbook, provided a guide to the structure of the CD-ROM learning resource, emphasised the importance of the primary reference journal and the indicative number of hours students are expected to apply to unit in order to be successful. The structure of the CD-ROM learning resource included a number of modules which relate to one or two chapters of the theory text book. Each module had a narrated introduction by the Lecturer-in-Charge; prescribed textbook reading; power-point slides relevant to the chapter in focus; a mini narrated lecture which provided a link between theory and practice; and experiential question and answer narrated by the Lecturer-in-Charge; a video question with narrated answer; a case study analysis linked to a website and an article to read provided as a .pdf file. The Unit assessment included multiple choice questions, a case analysis assignment and a take-home exam with two essay questions and a case analysis.

In summary the design of the unit incorporated hybrid delivery methods and aimed to facilitate a high level of critical engagement by students by focusing on the development of critical thinking skills. The Unit adopted the notion of a flipped

classroom by encouraging students to undertake a significant amount of work prior to the lectures and tutorials which then focused on problem-based activities. The collective set of learning outcomes were embedded at every level of Bloom's taxonomy. These levels are outlined in Chapter 2, Figure 2.4.

An example of how Bloom's taxonomy is embedded in the learning outcomes, in this case Learning Outcome 4, is shown below in Table 3.1:

Table 3.1: Example of Bloom's Taxonomy embedded in the Learning Outcomes.

Learning Outcome	Teaching and Assessment Method	Elements of Blooms Taxonomy
Conceptualise and articulate the usefulness and relevance of existing theories, concepts and frameworks in dealing with issues in strategic management.	Lecture; tutorials; the prescribed textbook; the CD-ROM learning resource and the case study workshops.	<p>Remember (retrieving information from the long-term memory)</p> <p>Understand (determining the meaning of the instructional message including oral and written communication)</p> <p>Apply (carrying out or using a procedure in a given situation) and</p> <p>Evaluate (making judgments on criteria or standards).</p>

3.3 RESEARCH METHODS

To gather data that enables the research proposition to be addressed a mixed-method approach was used (Tashakkori & Teddlie, 2003). This is a procedure for collecting, analysing and mixing both quantitative and qualitative data at some stage of the research process within a single study, to understand a research problem more completely (Creswell, 2002). When used in combination, quantitative and qualitative methods complement each other and allow for more complete analysis (Green, Caracellit & Graham, 1989; Tashakkori & Teddlie, 1998).

The choice of methodology should suit the purpose of addressing the research proposition outlined in this study. In accordance with the postpositivist epistemological stance chosen by the researcher, it was decided that in order to investigate and understand complex social phenomenon it required a mixed-method approach, to capture the subtleties of the impact of hybrid flexible delivery method on the level of critical engagement (Nilsen & Purao, 2005; Wood, M., Daly, J., Miller, J. & Roper, M., 1999). To this end, quantitative and qualitative data collection and analysis methods were used.

Triangulation is looking at something from different angles or viewpoints to get a fix on its true position. In social research, triangulation means using different types of measures or data collection techniques in order to analyse the same variable (Neuman, 1997). Triangulation operates under several assumptions. Triangulation is the idea where each method of the data gathering process has its own weaknesses, which will be compensated for by the strengths of another. That is, the strengths and weaknesses should complement each other (Leedy, 1993). Another assumption of triangulation of methods is that different and independent measures do not share the same weaknesses or potential for bias as when using a single data gathering technique (Jick, 1979).

This study made some use of triangulation for the benefits outlined above. Moreover, the use of a qualitative method in addition to a quantitative method allowed students to comment on specific aspects of the unit's delivery and assessment methods and make personal recommendations as to how the unit could be improved to facilitate an increased level of critical engagement.

In this study, quantitative methods were used as a basic methodology with the support from qualitative data. Open-ended questions were used in the

questionnaire and a focus group was conducted after the post-unit questionnaire to provide the qualitative data. This enabled the triangulation of results and provided contextual information.

3.3.1 QUANTITATIVE DATA

As indicated above the quantitative data element was primary and consisted of a questionnaire. For the purpose of consistency with published studies, the questionnaire used to collect quantitative data was based on the literature review and on established measures (Bloom's Taxonomy) and a published questionnaire (Athanassiou et al, 2003; Krathwohl, 2002). The questionnaire and instructions for students are shown in Appendix 1 and 2. Given the limited time available and nature of the phenomena and the longitudinal nature of the study, the research oriented itself towards the mixed-method approach. Furthermore it was determined that the amount of data to be collected would prohibit the use of interviews as a primary data source, therefore a questionnaire was deemed to be more appropriate. Yin (1994) said that a questionnaire is appropriate when "a what" question is being asked about a contemporary set of events over which the investigator has little or no control. This fits well with the nature of this exploratory research.

An exploratory questionnaire approach is where a questionnaire is used as a "search device" for helping to give direction to a topic or to explore a variety of different explanations that interests the researcher (Babbie, 2005). Questionnaires are usually cheaper, quicker and broader in coverage than interviews. Relying on the main technique of questionnaires, they can provide useful information on learners in a post-graduate unit of study.

The questionnaire had objectives defined in three categories:

A. Determine students' level of agreement or disagreement regarding their confidence in achieving each of the learning outcomes by the end of the Unit.

B. Determine students' level of agreement or disagreement regarding the extent that each of the teaching and assessment methods utilised in the Unit contribute to their learning.

C. Determine students' level of agreement or disagreement regarding the Unit methods and if they assist in developing high level academic, critical and reasoning skills and useful and relevant practical, work-related skills.

The choice of questions in the questionnaire directly related to the research proposition and to the longitudinal nature of the research. The choice of questions was also informed by previous surveys (Athanassiou et al., 2003; Krathwohl, 2002).

In the questionnaire, the level of critical engagement with the learning outcomes and teaching and assessment methods was presented as statements. Respondents were asked to indicate, using a Likert scale, the extent to which they agree/disagree overall with each statement. For the purpose of this research, critical engagement is where students responded to each category question with 'strongly agree' and by extension a more positive change from pre-unit to post-unit would indicate a higher level of critical engagement.

The survey consisted of 22 questions focusing on the three categories. There were two types of questions used in this study: open-ended and pre-coded questions. Pre-coded questions are where the responses were fixed and respondents were expected to choose the option which he or she agreed with most (Sarantakos,

1998). There were two types of pre-coded questions that were used in the survey questionnaire:

Single response item

For the single response questions, respondents were only allowed to tick one of the alternatives provided. An example of a single response question is shown in Background Information (Appendix 1 and 2) where a respondent needed to circle only one box to indicate their age group.

Scales of increasing strengths

Scales of increasing strengths provide sets of numbers ranging from low to high, from which the respondent was expected to choose one.

The pre-unit and post-unit questionnaire are provided in Appendix 1.

A Participant Information Sheet (Appendix 3) and questionnaire were distributed to all participants enrolled in BMA799 *Strategic Management* on two occasions: at the commencement of the lecture in Week 1 Semester 2, 2010 (pre-unit) and after the lecture in Week 13, Semester 2, 2010 (post-unit).

The research employed a purposive sampling method which is when the unit to be observed is selected in a systematic way based upon prior knowledge of the target population and the purpose of the study (Bryman & Bell, 2007:500; Babbie, 2005). The sample for this research comprised male and female students undertaking the nominated unit and drawn from 105 students enrolled in this unit.

The independent variables of age, gender, first language, year of enrolment and level of student prior achievement were chosen to see if they impact on the level of critical engagement. The options given to participants regarding age were 20 – 29; 30 – 39; 40 – 49 and 50+. The age categories were recoded into two categories as there were no students in the sample in the 50+ category and a small number of students

in the 40 – 49 category (pre-unit) and in the post-unit questionnaire there were no students in the 40 – 49 or 50+ age groups. The options given to respondents regarding prior achievement were Certificate IV; Diploma; Advanced Diploma; Bachelor Degree and Graduate Certificate. The options given to respondents regarding language were “Is English your first language? Yes or No.”

Respondents were asked to include the same unique identifying code on their completed pre-unit (Time 1) and post-unit (Time 2) questionnaires. This code comprised the first three letters of their mother’s maiden name and the last three numbers of their contact telephone number. The code was confidential to the respondent and not known to the researchers. This code was used to match data sets gathered pre-unit and post-unit.

An important factor to consider when using questionnaires is validity and relates to the soundness of the actual data gained from respondents (Dwyer, 1999). Trial questionnaires help a researcher to minimise errors before the actual questionnaire takes place. The questionnaire can be examined during a trial for clarity and length. Trialling a questionnaire on a small group of subjects is an essential phase in conducting a survey. Therefore prior to conducting the actual research, the questionnaire was checked and trialled by six post-graduate students external to the unit being investigated. They were chosen on the basis of their representativeness of the student populations to the unit under investigation. The feedback resulted in modification to the language used in the survey questionnaire to accommodate a large proportion of students in the research cohort who had English as a second language. The trial group also provided an estimate of the time needed to complete the questionnaire and were asked to comment on any perceived ambiguities in each question and to recommend additional questions. Feedback suggested each questionnaire took approximately 20 minutes to complete.

Another important consideration when conducting a survey questionnaire is content validity which was also achieved through the use of the trial questionnaire. Content validity is concerned with how accurately the questions asked elicit the information sought (Babbie, 2005). Therefore, the trial process was likely to ensure that any ambiguous and double-barrelled questions could be avoided. This process was necessary to yield as much information as possible without confusing the respondents with poorly structured questions. The Participant Project Information sheet (Appendix 4), was included with the questionnaire in order to give respondents and those participating in the trial, an overview of the study. The feedback received confirmed that only minor alterations were needed.

A possible problem when conducting a survey is a low response rate. Limited responses from a sampled population may be due to two reasons. One is that the respondents cannot be contacted; the other is that respondents may not have attended the lectures when the questionnaires were administered, or if they were attending, did not participate in the questionnaire. The researcher undertook several precautionary measures to increase the response rate. The respondents were advised prior to Lecture 1 by email when the questionnaires would be undertaken and reminded on two occasions during the semester when the post-unit questionnaire would be undertaken.

Permission to conduct the questionnaires during lecture time was obtained from the Lecturer-in-Charge who was not in the room at the time of survey. Participation in this research study was fully voluntary.

Questionnaire data was analysed using Descriptive Statistics, Independent T-Tests and Factor Analysis. Descriptive statistics involves the collection, presentation and characterisation of a set of data concerning a population often based only on a

sample result (Berenson & Levine, 1992). A key advantage of descriptive statistics is that they make a mass of research material easier to interpret. By reducing a large set of data into a few statistics or tables, the results of the research are likely to be more readily understood. Independent-Samples T-Tests have been used in this research study to compare the mean score of continuous variables, including teaching and assessment methods employed in the unit for two different groups of subjects (Pallant, 2007:232). These results were coded using the PASW (Predictive Analytics Software) Statistics package Version 18.0.

The Independent Samples T-Test was specifically used to tell whether males and females differ significantly in terms of their degree of confidence in achieving the learning outcomes prior to commencing the unit being investigated. As a result of completing the unit, the degree of confidence the student has that he or she can now demonstrate the learning outcome. In statistical terms the test is of the probability that the two sets of scores (for example gender) came from the same population (Pallant, 2007).

Exploratory Factor Analysis was used to gather information about the inter-relationships among the variables: learning outcomes, teaching and assessment methods and the development of other work-related skills (Pallant, 2007).

3.3.2 THE QUALITATIVE DATA

The qualitative element consisted of feedback on the pre-unit and post-unit questionnaire and from a focus group.

The qualitative data component of the questionnaire was based on the following questions:

Pre-Unit Questionnaire

- What three things do you expect to enjoy most about this Unit's delivery?
- What three things do you expect to enjoy least about this Unit's delivery?

Post-Unit Questionnaire

- What three things did you enjoy most about this Unit's delivery?
- What three things did you enjoy least about this Unit's delivery?
- What three things do you think could be improved about this Unit's delivery?

The questions were based on prior surveys (Athanasios et al., 2003; Krathwohl, 2002) and on responses from students during the questionnaire trial process. The responses to these questions led the researcher to believe the comments would be of interest and further investigation. The responses are presented in Appendix 3.

In order to address the comments it was appropriate to ask open-ended questions where respondents were free to formulate their answers the way they considered to be the most appropriate, in their own way and in their own words. This type of question enabled assessment of the students 'most enjoyed' and 'least enjoyed' aspects of the unit and provided an opportunity for students to offer suggestions on how the unit teaching and assessment methods could be improved to increase the level of critical engagement.

A semi-structured focus group was also conducted as part of the mixed-method approach to the study to add richness to the data collected from the survey questionnaires. In social research, the aim of a focus group is for the interviewer to elicit information from the focus group member or 'respondent'. This information may include the respondents' behaviour, attitudes, norms, beliefs and values

(Bryman, 2001). It is important that the 'interviewer' make it possible for a respondent to bring the interviewer into his or her own world.

The focus group questions came out of the data collected from the questionnaire so an inductive approach was adopted (Babbie, 2005). The focus group took place during Week 13 of Semester 2 2010, following completion of the post-unit questionnaire. The focus group allowed the researcher to invite expanded answers to determine any themes to add support to the data collected in the two questionnaires (May, 1993). A trial focus group was conducted with ten students external to the unit being researched, to ensure that all 'real' focus groups would provide a rich set of data.

The focus group consisted of ten participants and comprised a formal component using questions prepared prior to the focus group (Appendix 4) and an informal component, where the researcher gained further insight using additional questions. The focus group questions were developed immediately after completion of the post-unit questionnaire and analysis of the quantitative data and a review of the qualitative comments provided at the end of both the pre-unit and post-unit questionnaire.

The formal component of the focus group consisted of the following questions:

- Do you think you have been successful in achieving the Learning Outcomes in BMA799?
- What factors motivated you to learn and why?
- What comments would you make about the teaching and assessment methods? Which engaged you the most? Why?
- Do you feel you were critically engaged in the unit? How?
- What did you most enjoy in the unit? What did you least enjoy? Did this influence you achieving the Learning Outcomes?

The informal questions arose from responses to the formal questions and allowed probing for additional or different contextual material to be gathered (Babbie, 2005). In some instances these responses produced comments about the development of academic, critical and reasoning skills and the development of useful and relevant practical work-related skills. The responses to the focus group questions are discussed in both Chapter 4 (Results) and Chapter 5 (Discussion).

A summary based on the recorded focus group transcript was prepared shortly after the focus group. Permission for recording the focus group was gained from the participants prior to the commencement of the focus group. It was important to write up the focus group question responses soon after the session, while the full context of the focus group remained clear to the researcher. Appendix 2 is the Focus Group Transcript and Research Memos.

3.4 ETHICS

Before contacting participants, it was important that the researcher address the ethics of the research. Knowledge obtained during the period of study was not considered highly sensitive, and was approved by the University of Tasmania's Human Research Ethics Committee. Ethics formed an important consideration throughout the period of investigation, and the following steps were taken to ensure the research remained ethical:

- a. Participants were approached in an appropriate manner;
- b. Adequate explanation was given to participants;
- c. Informed consent was gathered from each participant;
- d. Participants were given the opportunity to 'opt out' of the research at any time.

3.5 LIMITATIONS OF THE STUDY

There are two noteworthy limitations of this study: generalizability and longitudinal effects (Babbie, 2007). The generalizability of research findings are limited because they were generated as an exploratory and quantitative piece of research. The research design does not account for, or predict, the behaviour of a wide classification of people as most experimental, hypothesis-testing studies are. This liability was clear at the outset given a small, non-random sample which is not representative of the student population.

The profile of the student cohort also impacts on generalisability. As a small number of students had English as their first language, this limits the reliable assessment of the role of language in critical engagement. The language of students who participated in the research may also have impacted on their ability to understand and comprehend the terminology used in the questionnaires. Although the questionnaire was trialled before implementation, the impact of language comprehension is likely to be minimal, but is still a consideration.

No mid-unit questionnaire was conducted due to students' lack of availability which may have given further insight into, or an indication of, the degree of confidence in achieving the learning outcomes, the level of agreement regarding the teaching and assessment methods impacting on learning and the level of agreement regarding the unit methods assisting in the development of practical work-related skills. A mid-semester questionnaire may have also given an indication of the extent complex knowledge and high order thinking skills and practical work-related skills were developing which are fundamental to management development (Athanassiou et al., 2003). According to Arbaugh (2009) recent studies are beginning to take longitudinal and theoretically grounded approaches to comparing the delivery

mediums. Consistent with the predications of media-naturalness theory, Kock, Verville and Garza (2007, cited in Arbaugh 2009) recently found that although classroom-based students had higher learning outcomes at the midpoint of an undergraduate Information Systems (IS) course, these differences were gone by the end of the course.

Furthermore the use of self-reporting to measure students' level of confidence in achieving the learning outcomes pre-unit and post-unit completion, and their level of agreement that the unit methods will contribute to learning and assist in the development of work-related skills, is identified as a limitation. Although self-reporting methods allow students to describe their own experiences and attitudes, students may not respond truthfully, either because they cannot remember or because they wish to present themselves in a socially acceptable manner (Babbie, 2007). Social desirability bias can be an issue with self-reporting measures as students may respond in a way to portray themselves in a good light with respect to their teacher. Also self-reporting is inherently biased by the person's feelings at the time they filled out the questionnaire. For example, if a person feels bad at the time they fill out the questionnaire; their answers will be more negative. If the person feels good at the time, then the answers will be more positive (Babbie, 2007).

As previously discussed respondents completed a questionnaire using a Likert scale to indicate the extent to which they agreed/disagreed with each statement. There is a tendency with Likert scales for participants to respond towards the middle of the scale perhaps to make them look less extreme. As with any questionnaire, participants may provide the answers that they feel they should, and importantly as the data is quantitative it does not provide for in-depth replies (Babbie, 2007).

It was intended that students complete both the pre-unit and post-unit questionnaire. However, only 9 students completed both questionnaires. Reliability could have been increased by ensuring the same respondents completed both questionnaires.

Time and budget limitations made it impractical to assess whether the contribution of hybrid flexible delivery methods to critical engagement would differ for another cohort of students studying a post-graduate unit. With only one unit under investigation it is not clear that the level of critical engagement achieved by students in this unit would be the same; greater or lesser in another unit. These limitations have an impact on external validity and make the results difficult to generalise to other student cohorts.

Another limitation of this research is that the investigation did not differentiate students on the basis of the mode of study (i.e. full-time versus part-time) (Richardson et. al., 2003).

Furthermore there may be alternative explanations for the findings and future research could consider the interactions of individual differences such as cognitive ability; intelligence quotient and personality on teaching and assessment methods. In some instances when evaluations of flexible delivery methods do occur, they are often confounded by omitted variables (Alexander, 1999; MacCann, 1999; Bryant and Hunton, 2000 cited in Dowling, 2003). Furthermore it is not clear that this unit has sufficiently developed flexibilisation in its design to facilitate critical engagement or if critical engagement was the intention in the overall unit design.

In defence of this study even though there are limitations, the results do contribute to understanding the extent students are critically engaged in hybrid flexible delivery, however future research taking into consideration the limitations and with a larger sample size is recommended.

This chapter has provided a detailed explanation of the methodology used in this study. A description of the context and research methods has been presented. A rational and vigorous account of how the questionnaire constructs were operationalised was given, and the reliability and validity data associated with each major measurement scale was described. An overview of the data analysis techniques employed in answering the research questions was presented. Finally, the issue of ethics and limitations of the research have been outlined. The next chapter will present the key research findings that were derived from the statistical analysis of the data.

CHAPTER 4

RESULTS

Chapter 4: Results

4.1 INTRODUCTION

This chapter presents the results of the statistical analyses performed where response rates and variables are firstly discussed. Explanatory variables are then explained, descriptive statistics in relation to the responses to the questionnaire categories presented, then the relationship between responses pre-unit (Time 1) and post-unit (Time 2) and the actual results achieved, in terms of critical engagement are outlined.

Independent Samples T-Tests results to compare the levels of confidence and agreement regarding the three questionnaire categories by age, gender and year of enrolment are presented. Independent Samples T-Tests were also used to compare the level of agreement or disagreement regarding the influence of the teaching and assessment methods on learning and critical engagement by age and gender. Independent T-Tests were also used to compare the level of agreement or disagreement regarding development of academic and work-related skills development as a result of undertaking the unit by age and gender. All Independent Sample T-Tests were used with pre-unit and post-unit data. Exploratory Factor Analysis was used to gather information about the inter-relationships among the variables (Pallant, 2007).

Regression analysis was undertaken to test for inter-relationships between variables and for any statistical difference in the data. For the regression analysis, due to the low number of responses, the results were recorded into binaries of 'high' and 'low' categories. From a statistical viewpoint, the positioning of the division between 'low' and 'high' categories was made to give approximately the same number of respondents in each category. The alternative is to have a fixed division point based on the 6-point scale but with uneven numbers in each category.

4.2 RESPONSE RATE

Each student was asked to include a unique identifying code on their completed questionnaire to match to their result (numeric grade) in an effort to track changes at the individual level. Of the 105 students enrolled in BMA 799 Strategic Management, 24 of the pre-unit questionnaires and 21 of the post-unit questionnaires had to be discarded for analysis as the unique identifying code was not included on the completed questionnaire. Without an identifier there is the possibility that respondents may be entered more than once. The overall response was 41 useable questionnaires for both pre-unit and post-unit representing 25.6% of the 105 students enrolled in the unit being investigated: BMA 799 *Strategic Management*.

Students completed one or both of the questionnaires that are shown in Appendix 1 and 2. The intention was to have the same set of students complete pre-unit and post-unit questionnaires however, in general students completed only one of the questionnaires. This was because the questionnaires were administered at the beginning of the lectures in Weeks 1 and 13 of Semester 2, 2010 and students either didn't attend the specified lecture, were late, or chose not to participate in the research. Consequently three groups of students were defined for the purpose of research. These groups are:

Group 1: which comprised 41 students who provided responses to the pre-unit questionnaire only;

Group 2: which comprised 41 students who provided responses to the post-unit questionnaire only and

Group 3: which was formed from the 9 students who provided responses to both pre-unit and post-unit questionnaires.

It should be noted that the respondents in Groups 1 and 2 are not necessarily the same, although a small cross-over occurred (22%). Respondents in Group 3 are also not necessarily the same respondents as those in Groups 1 and 2.

4.2.1 RESPONSE VARIABLE

At the completion of the unit, a final assessment was undertaken and students were given a numeric assessment or result to measure their grade. Students were assigned a result or grade according to the following table:

Table 4.1: The relation between numerical results and assigned final grades

Grade	PP	CR	DN	HD
Numeric Response	50 – 59	60 – 69	70 -79	80 or more

All students who participated in the unit being investigated achieved results or grades in the range 55 to 91, that is in the range of pass to high distinction. No students failed the unit.

4.3 EXPLANATORY VARIABLES

Demographic variables investigated were, age, gender, year of enrolment, whether English is the first language or not and level of student prior achievement.

Tables 4.2 and 4.3 represent the age, gender and enrolment year of students who completed the pre-unit and post-unit questionnaire. The tables indicate a high proportion of respondents were in the 20-29 year old age category, female and enrolled in the first year of their post-graduate studies. As discussed in detail Chapter 3, that due to the low number of students in the 40-49 cohort of responses for the pre-unit survey, the data was recoded for further analysis to reflect two age groups only, being Group 1: 20 – 29 and Group 2: 30 years of age and older (30+).

Table 4.2: Pre-Unit Results

Age	Frequency	Percent	Gender	Frequency	Percent	Enrolment Year	Frequency	Percent
20-29	33	80	Female	25	61	1st	26	61
30-39	7	17	Male	16	39	2nd	15	39
40-49	1	3						

Table 4.3: Post-Unit Results

Age	Frequency	Percent	Gender	Frequency	Percent	Enrolment Year	Frequency	Percent
20-29	31	69	Female	23	56	1st	26	58
30+	10	21	Male	18	44	2nd	15	32

Intended learning outcome expectations for the unit were expressed as 11 variables each with a 6-point scale ranging from ‘Strongly Disagree’ to ‘Strongly Agree’. The same 6-point scale was used for the nine variables relating to the level of agreement or disagreement that the teaching and assessment methods will contribute to student learning and critical engagement. The same 6-point scale was used to indicate the students’ level of agreement or disagreement that the unit methods assist in skills development.

Language was recorded only in the post-unit questionnaire. At that time, as shown in Table 4.4, the number of responses not in the ‘N’ category is small which limits the reliable assessment of the role of language in critical engagement and therefore was not analysed.

Table 4.4: Distribution of students among language categories for post-unit questionnaire. Responses to the question: Is English your first language?

Language	
Missing	1
N	36
Y	4

As a qualifier, qualifications were not recorded in the pre-unit questionnaire as it was anticipated that students would complete both questionnaires pre-unit and post-unit. Given the student profile, it would suggest the results are likely to have been similar. Similarly in the post-unit questionnaire responses, there were too few outside the 'Bachelor Degree' classification to allow a reliable comparison, and so was not analysed.

Table 4.5: Distribution of students among qualification categories for post-unit Survey Questionnaires

Associate Diploma	1
Bachelor Degree	34
Diploma	1
Graduate Certificate	4
Qualification not indicated	1

4.4 DESCRIPTIVES

The tables in this section show the distribution of responses specifically related to the level of confidence in respondents' ability to achieve the learning outcomes, the level of agreement or disagreement on the extent each teaching and assessment method contribute to learning and the extent the unit will contribute to the development of other work-related and academic skills. In Table 4.6 responses pre-

unit and post-unit were at the high end of the scale indicating a high degree of confidence in achieving the learning outcomes and critical engagement.

Table 4.6. Total number of responses in 6-point categories for each of the Category A questions at each questionnaire. Confidence in ability to achieve Learning Outcomes. Binary variables are formed by splitting the categories including the shaded cell and all cells to the left of the shaded cell.

Learning Outcome:	Pre-unit						Post-unit					
	1	2	3	4	5	6	1	2	3	4	5	6
A.1: Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organizations.				7	23	11			1	10	22	8
A.2: Draw conclusions from strategy data.				9	21	11				10	23	8
A.3: Apply this knowledge to case studies to reach reasoned conclusions about strategy.				14	19	8				10	22	9
A.4: Explain strategy in terms of the complexity and uncertainty facing business organizations.			1	19	16	5			1	13	16	11
A.5: Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.			1	11	22	6			2	10	18	11
A.6: Generate appropriate responses to key issues in strategic management.				11	22	8			2	7	23	9
A.7: Explain central theory in strategic management.				14	21	6			2	12	20	7
A.8: Apply strategic management principles to present or future work experiences.			2	12	15	12			2	9	22	8
A.9: Integrate conceptual approaches to strategic management and write about real world experiences.			4	15	16	6				10	22	9
A.10: Demonstrate good written communication in English.		1	2	13	19	6			1	17	19	4
A.11: Present well-reasoned written arguments.			3	13	16	9				14	20	7

Table 4.7. Total number of responses in 6-point categories for each of the Category B questions at each questionnaire - Level of agreement regarding teaching and assessment methods and their contribution to learning. Binary variables are formed by splitting the categories including the shaded cell and all cells to the left of the shaded cell.

	Pre-unit						Post- unit					
Teaching and Assessment method:	1	2	3	4	5	6	1	2	3	4	5	6
B.1: Lectures				9	14	18				7	21	13
B.2: Tutorials			1	4	13	23	3	3	3	10	15	7
B.3: Case study workshops			3	3	15	20				12	19	10
B.4: CD Learning resources		1	8	17	9	6		3	2	18	14	4
B.5: Prescribed textbook	1		4	12	15	9			1	11	21	8
B.6:Extra readings and handouts *		1	3	18	13	5			3	13	19	6
B.7: In-class multiple choice tests	1		6	19	9	6	1		4	14	19	3
B.8: Case Study essay assignment	1	1		9	21	9		1	1	5	22	12
B.9: Lecturer's teaching style			1	5	14	21				8	18	15

In Table 4.7, responses were at the high end of the scale indicating a high level of agreement that the teaching and assessment methods contribute to learning and critical engagement. In Table 4.8, responses were also at the high end of the scale indicating a high level of agreement that the unit methods assisted in the development of academic and work-related skills.

Table 4.8. Total number of responses in 6-point categories for each of the Category C questions at each questionnaire - The development of other work-related skills. Binary variables are formed by splitting the categories including the shaded cell and all cells to the left of the shaded cell.

	Pre-unit						Pos- unit					
Unit methods will assist develop:	1	2	3	4	5	6	1	2	3	4	5	6
C.1: High level academic, critical reasoning skills	1		2	6	23	9			3	11	19	8
C.2: Useful and relevant practical work-related skills				7	16	18				14	18	8

Older students, who may have had work experience, had a higher level of agreement that the unit provided useful and relevant practical work-related skills. Conversely, students had lower level of agreement that the unit provided development of high level academic, critical and reasoning skills.

Table 4.9. Percentages of students with different combinations of age and level of agreement to Question C.2.
C2.2

Age	High	Low
20 - 39	47%	53%
40+	76%	24%

4.5 SUMMARY OF THE RELATIONSHIP BETWEEN RESPONSES.

The following tables present a summary of the relationship between the responses to the statements regarding the level of confidence in achieving the learning outcomes (A.1 – A.11) pre-unit and post-unit. This is achieved by subtracting the pre-unit from the post-unit values. The complete tables are presented in Appendix 12. It can be seen that the responses were concentrated at the high end of the scale (S4 = Somewhat Agree; S5 = Agree and S6 = Strongly Agree).

The responses to the statement regarding learning outcome A.1 (Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations) showed that the greatest change from pre-unit to post-unit was from respondents who achieved a Credit grade. Their degree of confidence in achieving this learning outcome decreased from pre-unit to post-unit, whilst the degree of confidence from respondent who achieved a HD grade increased. Interestingly, those who had just passed also showed a positive change.

Table 4.10: Greatest change – pre-unit to post-unit: A.1 - Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations

Learning Outcome	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.1	HD	1	0	2	3
	DN	-1	0	-1	-2
	CR	2	-3	-3	-4
	PP	1	2	-1	2

The responses to statement regarding learning outcome A.2 (Draw conclusions from strategy data) show the greatest change from pre-unit to post-unit was from respondents who achieved a Credit grade. Their degree of confidence in achieving this learning outcome decreased from pre-unit to post-unit. The opposite occurred for respondents who achieved a Pass and a High Distinction as their overall degree of confidence increased similarly to the previous question.

Table 4.11: Greatest change – pre-unit to post-unit: A.2 – Draw conclusions from strategy data

Learning Outcome	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.2	HD	0	2	2	4
	DN	-2	2	-1	-1
	CR	1	-3	-1	-3
	PP	2	1	0	3

The responses to the statement regarding learning outcome A.3 (Apply this knowledge to case studies to reach reasoned conclusions about strategy) showed the

greatest change from pre-unit to post-unit was from respondents who achieved a Credit grade. Their degree of confidence in achieving this learning outcome decreased from pre-unit to post-unit. The opposite occurred for those who achieved a High Distinction and a Pass as their overall degree of confidence increased from pre-unit to post-unit.

Table 4.12: Greatest change – pre-unit to post-unit: A.3 – Apply this knowledge to case studies to reach reasoned conclusions about strategy

Learning Outcome	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
A.3	HD	-2	3	2	3
	DN	0	0	-1	-1
	CR	-3	0	-1	-4
	PP	1	0	1	2

The responses to the statement regarding learning outcome A.4 (Explain strategy in terms of the complexity and uncertainty facing business organisations) showed the greatest change from pre-unit to post-unit was from respondents who achieved a Credit grade. Their degree of confidence in achieving this learning outcome decreased from pre-unit to post-unit. The opposite occurred for those who achieved a High Distinction and a Pass as their overall degree of confidence increased from pre-unit to post-unit.

Table 4.13: Greatest change – pre-unit to post-unit: A.4 – Explain strategy in terms of the complexity and uncertainty facing business organisations

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
A.4	HD	-4	4	3	3
	DN	-1	-1	1	-1
	CR	-1	-5	2	-4
	PP	0	2	0	2

The responses to the statement regarding learning outcome A.5 (Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management) showed the greatest change from pre-unit to post-unit was from respondents who achieved a Credit grade. Their degree of confidence in achieving this learning outcome decreased from pre-unit to post-unit. The opposite occurred for those who achieved a High Distinction as their overall degree of confidence increased from pre-unit to post-unit.

Table 4.14: Greatest change – pre-unit to post-unit: A.5 – Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
A.5	HD	-4	4	3	3
	DN	-1	-1	1	-1
	CR	0	2	2	-4
	PP	0	2	0	2

The responses to the statement regarding learning outcome A.6 (Generate appropriate responses to key issues in strategic management) showed the greatest change from pre-unit to post-unit from respondents who achieved both Distinction and Credit grades. For both sets of respondents their overall level of confidence decreased.

Table 4.15: Greatest change – pre-unit to post-unit: A.6 – Generate appropriate responses to key issues in strategic management

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.6	HD	-3	3	2	2
	DN	-2	0	0	-2
	CR	1	-3	-2	-4
	PP	0	1	1	2

The responses to the statement regarding learning outcome A.7 (Explain central theory in strategic management) showed the greatest change from pre-unit to post-unit from respondents who achieved a Distinction and Credit result. Those who achieved a Distinction recorded an overall increase in their level of confidence; conversely those who achieved a Credit recorded an overall decrease in their level of confidence.

Table 4.16: Greatest change – pre-unit to post-unit: A.7 – Explain central theory in strategic management

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.7	HD	1	1	0	2
	DN	0	2	2	4
	CR	-3	0	-1	-4
	PP	0	1	1	2

The responses to the statement regarding learning outcome A.8 (Apply strategic management principles to present or future work experiences) showed the greatest change from pre-unit to post-unit from respondents who achieved a High Distinction, Pass and Credit result. Those who achieved a High Distinction and Pass recorded an overall increase in their level of confidence; conversely those who achieved a Credit recorded an overall decrease in their level of confidence.

Table 4.17: Greatest change – pre-unit to post-unit: A.8 – Apply strategic management principles to present or future work experiences

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.8	HD	-2	2	2	2
	DN	0	0	-1	-1
	CR	-2	4	-5	-3
	PP	1	1	0	2

The responses to the statement regarding learning outcome A.9 (Integrate conceptual approaches to strategic management and write about real world

experiences) showed the greatest change from pre-unit to post-unit from respondents who achieved a High Distinction and Credit result. Those who achieved a High Distinction recorded an overall increase in their level of confidence; conversely those who achieved a Credit recorded an overall decrease in their level of confidence.

Table 4.18: Greatest change – pre-unit to post-unit: A.9 - Integrate conceptual approaches to strategic management and write about real world experiences

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.9	HD	-4	6	2	4
	DN	1	1	0	2
	CR	-2	-4	2	-4
	PP	0	3	-1	2

The responses to the statement learning outcomes A.10 (Demonstrate good written communication in English) showed the greatest change from pre-unit to post-unit from respondents who achieved a High Distinction, Distinction and Pass result. Those who achieved a High Distinction recorded an overall decrease in their level of confidence; conversely those who achieved a Distinction and Pass recorded an overall increase in their level of confidence.

Table 4.19: Greatest change – pre-unit to post-unit: A.10 – Demonstrate good written communication in English

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A.10	HD	-2	-2	0	-4
	DN	3	3	-1	5
	CR	1	1	-1	1
	PP	2	2	0	4

The responses to the statement regarding learning outcome A.11 (Present well-reasoned written arguments) showed the greatest change from pre-unit to post-unit from respondents who achieved a High Distinction and Credit result. Those who achieved a High Distinction recorded an overall increase in their level of confidence; conversely those who achieved a Credit recorded an overall decrease in their level of confidence.

Table 4.20: Greatest change – pre-unit to post-unit: A.11 – Present well-reasoned written arguments

Learning Outcome	Result/Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
A1.11	HD	-2	3	2	3
	DN	4	-1	-3	0
	CR	-2	1	-1	-2
	PP	1	1	0	2

Overall, the greatest variance in the level of confidence of respondents from pre-unit to post-unit was from respondents who achieved a High Distinction and Credit specifically in relation to statements regarding learning outcomes A.1, A.3,

A.4, A.5, A.8, A.9 and A.11. These statements relate to learning outcomes with an application of theoretical concepts and frameworks and practical skills development focus. Significant variance in the level of confidence of respondents pre-unit and post-unit came from respondents who achieved a High Distinction and Credit in relation to questions A.1, A.2, A.3, A.4, A.5, A.6 and A.7. Each of these learning outcomes had a theoretical or conceptual focus.

The next set of tables relate to the statements regarding the level of agreement that each of the teaching and assessment methods contribute to learning (B.1 – B9) and the degree of change in the level of agreement pre-unit to post-unit.

The responses to the statement regarding B.1 (Lectures) showed the greatest change from pre-unit to post-unit from respondents who achieved a High Distinction and Credit. Those who achieved a High Distinction recorded an overall higher level of agreement regarding the lectures contribution to learning. Conversely those who achieved a Credit, recorded an overall decreased level of agreement regarding this teaching and method. There was no significant difference in scores for females and males pre-unit and post-unit for this learning outcome as indicated in Appendix 8 and 9.

Table 4.21: Greatest change – pre-unit and post-unit: B.1 - Lectures

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
B.1	HD	0	3	0	3
	DN	0	0	-1	-1
	CR	-3	3	-4	-4
	PP	1	1	0	2

The responses to the statement regarding B.2 (Tutorials) showed the greatest change from pre-unit to post-unit from respondents who achieved a Distinction and Credit. Those who achieved these grades recorded an overall decreased level of agreement regarding the tutorials contribution to learning. Responses from focus group participants indicated that the structure of the tutorials did not support students who came prepared for the tutorial in that preparation that was required before the tutorial was not acknowledged. The view of the focus group participants was that the tutorial time was not well organised, for example: ‘the tutorials were vague in that if the class had not read the required material, the tutor would not discuss the point. The students who had read the required piece were penalised if the majority of the class hadn’t read the article’. Other students commented in the post-unit questionnaire ‘need [for] greater structured tutorials.’

The qualitative questionnaire comments are summarised in Appendix 2 - Focus Group Transcript – and Appendix 3 - Summary of Qualitative Data collected from the Questionnaire.

Table 4.22: Greatest change – pre-unit to post-unit: B.2 - Tutorials

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6 = Strongly Agree	Total
B.2	HD	3	2	-4	1
	DN	-1	-1	-5	-7
	CR	3	0	-6	-3
	PP	1	1	-1	1

Responses to the statement regarding B.3 (Case study workshops) showed the greatest change from pre-unit to post-unit from respondents who achieved a High

Distinction and Credit. Those who achieved a High Distinction recorded an overall increase in agreement that case study workshops contributed to learning while those who recorded a Credit recorded an overall decrease in their level of agreement regarding the case study workshops contribution to learning.

Table 4.23: Greatest change – pre-unit to post-unit: B.3 – Case study workshops

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.3	HD	4	0	-1	3
	DN	4	-1	-3	0
	CR	1	2	-5	-2
	PP	0	3	-1	2

The responses to the statement regarding B.4 (CD-ROM learning resource) showed a small change from pre-unit to post-unit. Respondents who achieved a High Distinction and Pass recorded an overall small increase in their level of agreement that the CD-ROM learning resources contributed to learning while those who recorded a Credit recorded a decrease in their level of agreement regarding these resources contribution to learning. Focus group respondents indicated that the CD-ROM learning resource was useful in terms of the mini-lectures and use of examples that provided reinforcement. As indicated in Appendix 3, according to the focus group respondents, the CD-ROM learning resource also provided useful information about upcoming lectures.

Table 4.24: Greatest change – pre-unit to post-unit: B.4 – CD-ROM learning resources

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.4	HD	-1	1	2	2
	DN	4	-2	-1	1
	CR	-2	3	-2	-1
	PP	0	3	-1	2

The responses to the statement regarding B.5 (Prescribed textbook) showed a change from pre-unit to post-unit from respondents who achieved a High Distinction and a Pass. They recorded an overall increase in the level of agreement that the prescribed textbook contributed to learning. Respondents who achieved both a Distinction and a Credit recorded an overall decrease in the level of agreement that this resource contributed to learning.

Table 4.25: Greatest change – pre-unit to post-unit: B.5 – Prescribed textbook

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.5	HD	-2	5	0	3
	DN	3	-3	-1	-1
	CR	1	-2	-1	-2
	PP	2	0	0	2

The responses to the statement regarding B.6 (Extra readings and handouts) showed a change from pre-unit to post-unit from respondents who achieved a High

Distinction and Distinction. Those who achieved a High Distinction recorded an overall increase in the level of agreement that the extra readings and handouts contributed to learning. Respondents who achieved a Distinction recorded an overall decrease in the level of agreement that these resources contributed to learning.

Table 4.26: Greatest change – pre-unit to post-unit: B.6 – Extra readings and handouts

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.6	HD	-2	3	2	3
	DN	-4	3	-1	-2
	CR	0	-1	0	-1
	PP	1	1	0	2

The responses to the statement regarding B.7 (In-class multiple choice test) showed a change from pre-unit to post-unit from respondents who achieved a Credit and Pass. Those who achieved a Credit recorded an overall decrease in the level of agreement that the in-class multiple choice tests contributed to learning. Conversely respondents who achieved a Pass recorded an overall increase in the level of agreement that this assessment method contributed to learning.

Table 4.27: Greatest change – pre-unit to post-unit: B.7 – In-class multiple choice test

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.7	HD	-4	7	-2	1
	DN	3	-1	-1	1
	CR	-5	3	0	-2
	PP	1	1	0	2

The responses to the statement regarding B.8 (Case study essay assignment) showed a change from pre-unit to post-unit from respondents who achieved a High Distinction and Credit. Those who achieved a High Distinction recorded an overall increase in the level of agreement that the case study essay assignment contributed to learning. Conversely respondents who achieved a credit recorded an overall decrease in the level of agreement that these resources contributed to learning.

Table 4.28: Greatest change – pre-unit to post-unit: B.8 – Case study essay assignment

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.8	HD	-2	0	4	2
	DN	0	-1	0	-1
	CR	-2	-1	0	-3
	PP	0	3	-1	-1

The responses to the statement regarding B.9 (Lecturer's teaching style) showed a change from pre-unit to post-unit from respondents who achieved a High Distinction and Credit. Those who achieved a High Distinction recorded an overall increase in the level of agreement that the lecturer's teaching style contributed to learning. Conversely respondents who achieved a Credit recorded an overall decrease in the level of agreement that this method contributed to learning.

Table 4. 29: Greatest change – pre-unit to post-unit: B.9 – Lecturer’s teaching style

Teaching and Assessment Method	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
B.9	HD	1	1	1	3
	DN	2	-1	-2	-1
	CR	0	2	-5	-3
	PP	0	2	0	2

Overall, the greatest variance in the level of confidence of respondents from pre-unit to post-unit was from respondents regarding the tutorials as a teaching method. In particular respondents who achieved a Distinction or Credit recorded a decrease in the level of agreement that the tutorials contributed to learning. Students who achieved a High Distinction recorded an overall increase in the level of agreement that the lecture; case study workshops; prescribed text; extra readings and the handouts; case study essay assignment and lecturer’s teaching style contributed to learning. Respondents who achieved a Credit recorded an overall decrease in the level of agreement from pre-unit to post-unit that the in-class multiple choice tests, lecturer’s teaching style, tutorials, lecture, case study workshops, CD-ROM learning resource, prescribed text and the handouts and case study essay contributed to learning.

The next two tables relate to the statements regarding the level of agreement that the unit methods assist in the development of academic and work-related skills. (C.1 and C.2).

The responses to the statement regarding C.1 (High level academic, critical and reasoning skills) showed a change from pre-unit to post-unit from respondents who achieved a High Distinction, Credit and Pass. Those who achieved a High

Distinction and Pass recorded an overall increase in the level of agreement that unit methods assisted in the development of high level academic, critical reasoning skills. Conversely, respondents who achieved a Credit recorded an overall decrease in the level of agreement that the unit assisted them.

Table 4.30: Greatest change – pre-unit to post-unit: C.1 - High level academic, critical and reasoning skills

Skill	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
C.1	HD	4	-3	2	3
	DN	1	0	0	1
	CR	-1	-3	0	-4
	PP	1	2	-1	2

The responses to the statement regarding C.2 (Useful and relevant practical work-related skills) showed a change from pre-unit to post-unit particularly from respondents who achieved a High Distinction, Credit and Pass. Those who achieved a High Distinction recorded an overall increase in the level of agreement that unit methods assisted in the development of useful and relevant practical work-related skills. The same overall change applied to Pass students. Those who achieved a Credit show an overall decrease in the level of agreement regarding this statement. There was no significant difference in scores for females and males pre-unit and post-unit for this learning outcome as indicated in Appendix 8 and 9.

Table 4.31: Greatest change – pre-unit to post-unit: C.2 – Useful and relevant practical work-related skills)

Skill	Result/ Grade	S 4 = Somewhat Agree	S 5 = Agree	S 6= Strongly Agree	Total
C.2	HD	2	-3	4	3
	DN	2	1	-5	-2
	CR	1	3	-8	-4
	PP	2	1	0	3

Overall, the greatest variance in the level of agreement pre-unit to post-unit was from respondents who achieved a Credit. Students who achieved these results recorded an overall decrease in the level of agreement that the unit methods assisted development of academic and practical work-related skills. Respondents who achieved a High Distinction and a Pass recorded an overall increase in the level of agreement from pre-unit to post-unit that the unit methods assisted in this skills development. A decrease in the level of agreement was also recorded pre-unit to post-unit for respondents who achieved a Distinction.

4.6 INDEPENDENT - SAMPLES T-TEST RESULTS

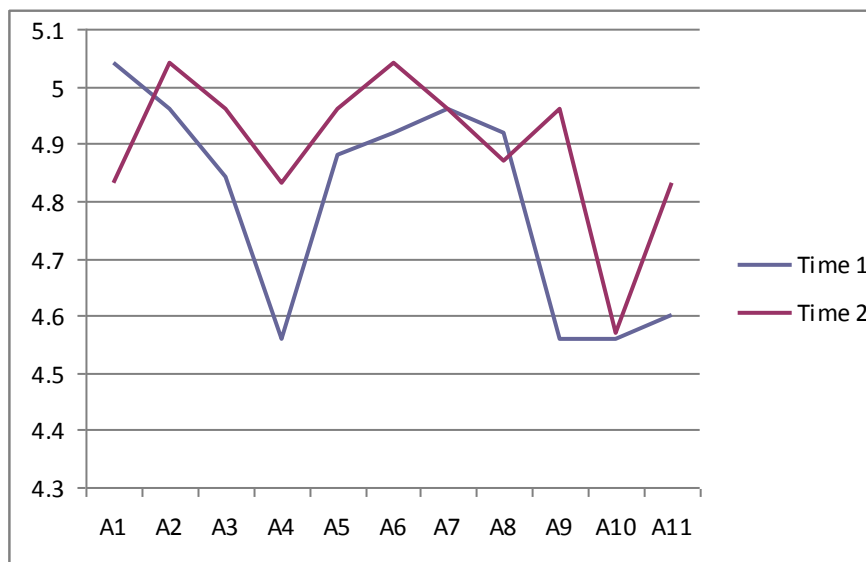
Independent-Samples T-Tests were conducted to compare by re-coded age the level of confidence in achieving the learning outcomes pre-unit and post-unit. The results of Independent T-Test pre-unit and post-unit are shown in Appendices 6 – 23. There was no significant difference in scores for Group 1 and Group 1 for any of the learning outcomes.

Independent-Samples T-Tests were conducted to compare by gender the level of confidence in achieving the learning outcomes pre-unit and post-unit. The results of the Independent Samples T-Tests pre-unit and post-unit are shown in Appendices

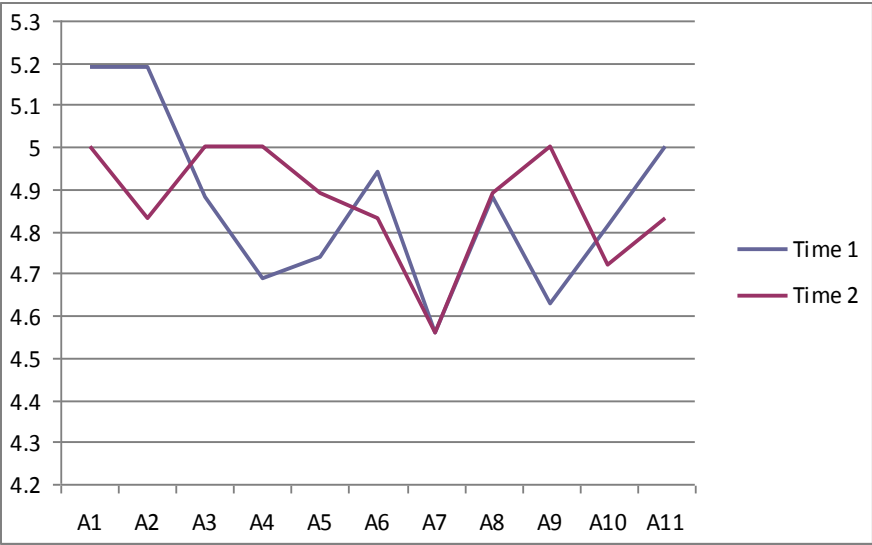
12 - 17. There was no significant difference in scores for females and males pre-unit or post-unit for any of the learning outcomes, as indicated in the noted appendices, except for C.1 (Development of high level academic, critical and reasoning skills). There was a significant difference in scores for the learning outcome C.1 pre-unit with females ($M = 5.08$, $SD = .640$) and males ($M = 4.56$, $SD = 1.315$); $t(41) = 1.688$, $p = .099$ (two-tailed) however, there was no significant difference in scores for this learning outcome post-unit for females and males.

The graphs below show, when looking at gender, there were some differences in terms of means.

Graph 4.32: Category A Questions - Females: pre-unit to post-unit



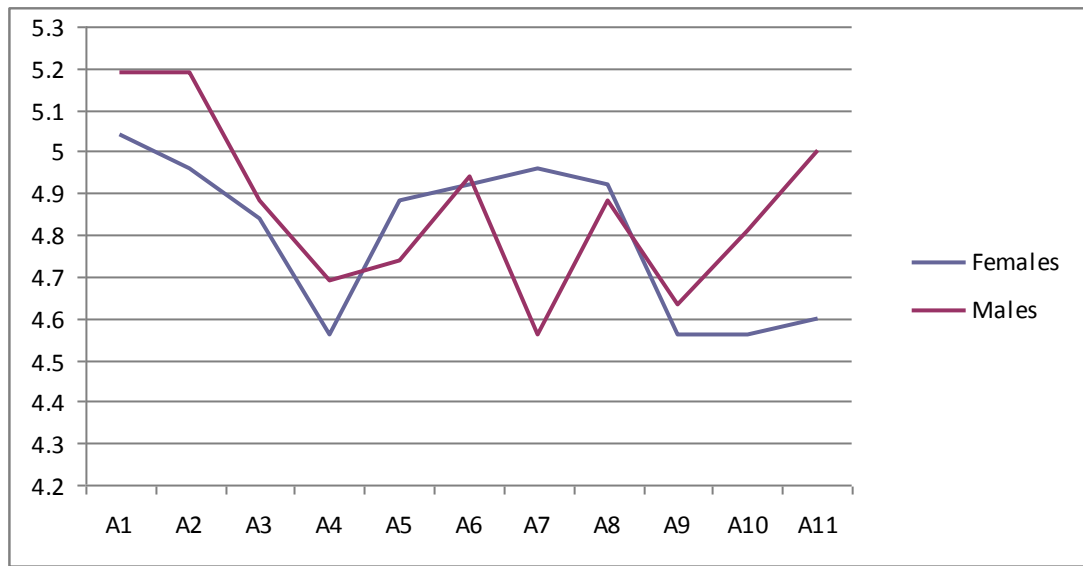
Graph 4.33: Category A Questions – Males: pre to post unit



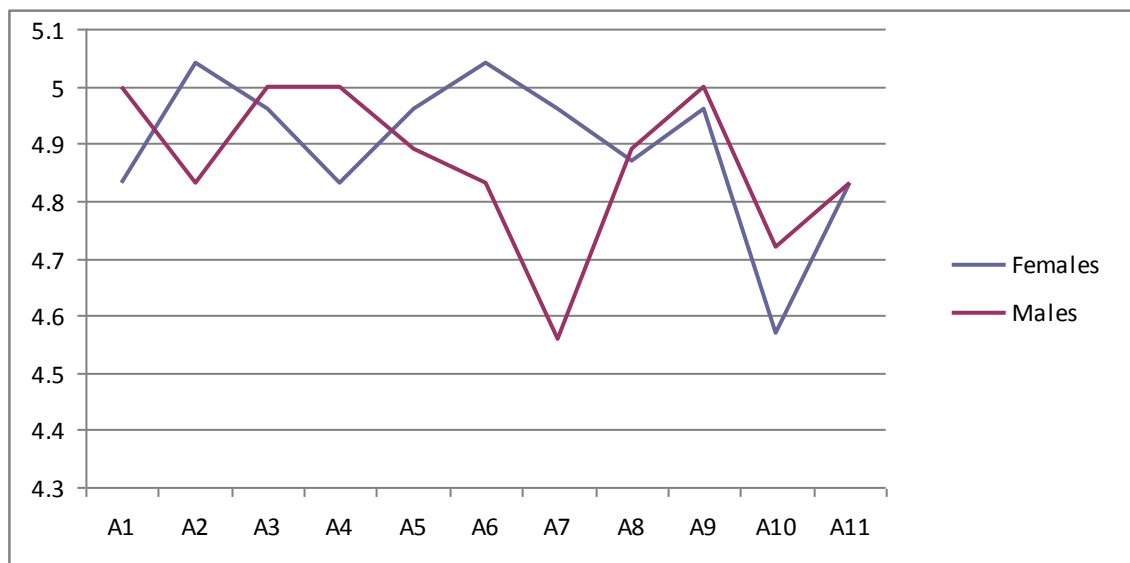
As shown in graphs 4.32 and 4.33 with respect to gender, females were in more agreement that they would achieve learning outcomes: A.1, A.2, A.7 and A. 8 pre-unit. Their level of confidence decreased for A.1 post-unit but increased post-unit for A.2, A.3, A.4, A.6, A.9 and A.11. Their level of confidence remained constant for A.7. Males were in more agreement that they would achieve learning outcomes: A.1, A.2, A.6, A.8, A.10 and A.11 pre-unit. Their level of confidence increased post-unit regarding learning outcomes: A.3, A.4 A.5 and A.9 but their level of confidence decreased post-unit regarding learning outcomes: A.2, A.6, A.10 and A.11 but remained the same for A.7.

When comparing the level of confidence in achieving the learning outcomes by gender pre-unit and post-unit, the mean was generally higher for males than females. As shown in graphs 4.33 and 4.34 the results of the pre-unit questionnaire show that females have a higher mean regarding learning outcomes A.5, A.7 and A.8 whilst males had a higher mean regarding learning outcomes A.1, A.2, A.3, A.4, A.6, A.9, A.10 and A.11.

Graph 4.34: Category A Questions - Gender comparison: pre-unit



Graph 4.35: Category A Questions - Gender comparison: post-unit

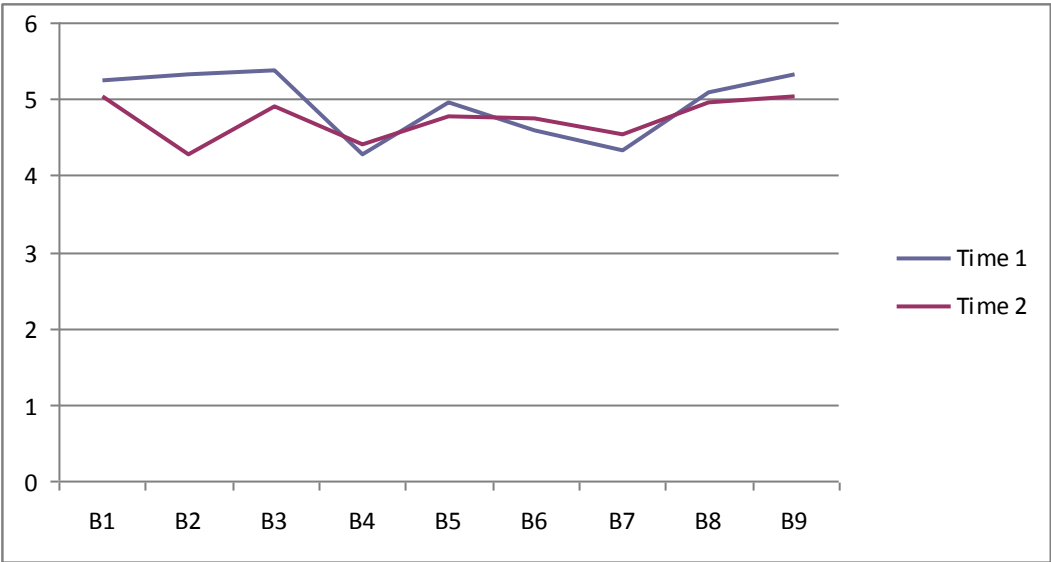


Overall the results of the post-unit questionnaire showed that the mean for females is higher than males regarding their level of confidence for achieving learning outcome A.2, A.5 and A.6. The mean for males was higher than females regarding their level of confidence for achieving learning outcomes A.1, A.3, A.4, A.8 and A.9.

An Independent-Samples T-Test was conducted to compare the level of agreement or disagreement by gender regarding the influence each of the teaching

and assessment methods had on learning pre-unit and post-unit. The results of the Independent Samples T-Test pre-unit to post-unit are shown in Appendix 8 and 9 and represented in Table 4.36 and Table 4.37.

Graph 4.36: Category B Question-Females: pre-unit to post-unit



Graph 4.37: Category B Questions - Males: pre-unit to post-unit



The results of the pre-unit questionnaire showed that females were in more agreement that the lectures, tutorials, case-study workshops and lecturer’s teaching style would assist them in achieving the learning outcomes but the post-unit survey

questionnaire showed the level of agreement by females had decreased for lectures, tutorials, case study workshops, the case study essay assignment and the lecturer’s teaching style. Conversely in the post-unit questionnaire, the level of agreement had increased regarding the prescribed text book and the multiple-choice test as strategies that contribute to learning.

When comparing the pre-unit and post-unit questionnaire results for males, regarding the level of agreement that the teaching and assessment methods would contribute to learning, the overall level of agreement decreased post-unit with exception of B.5, B.7 and B.8 which related to the prescribed textbook, in-class multiple choice tests and the case study essay assignment where the level of agreement increased. With respect to B. 9, the lecturer’s teaching style, the level of agreement pre-unit and post-unit for males remained the same.

Graph 4.38: Gender comparison: pre-unit



As shown in graph 4.38, the results of the pre-unit survey questionnaire showed that the mean for females was higher than the mean for males regarding their level of agreement that the teaching and assessment methods contributed to learning. In particular, the mean for questions B.3, B.5, B. 6 and B. 8 was higher for females

than males. The mean pre-unit for B4, the CD learning resources, was the same for females and males. The mean for B.2 which related to tutorials, was higher for males than females but there was no significant difference between genders for B.9, the lecturer’s teaching style.

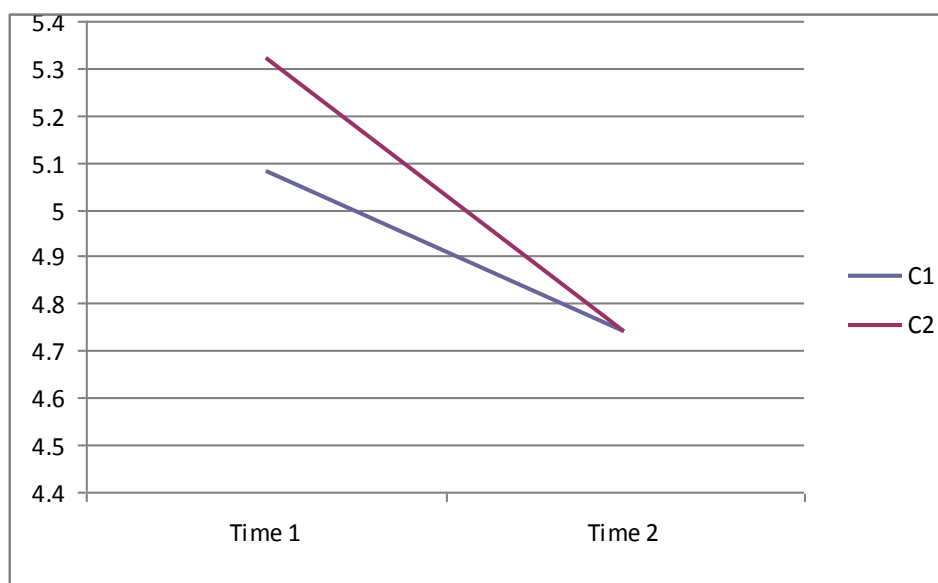
Graph 4.39: Gender comparison: post-unit



As shown in graph 4.39 the results of the post-unit survey questionnaire showed that the mean for females and males was similar with small differences in relation to the level of agreement that the teaching and assessment methods would contribute to learning. The mean for both females and males was high particularly for males in relation to statement B.1 and B.9 regarding lectures and the lecturer’s teaching style.

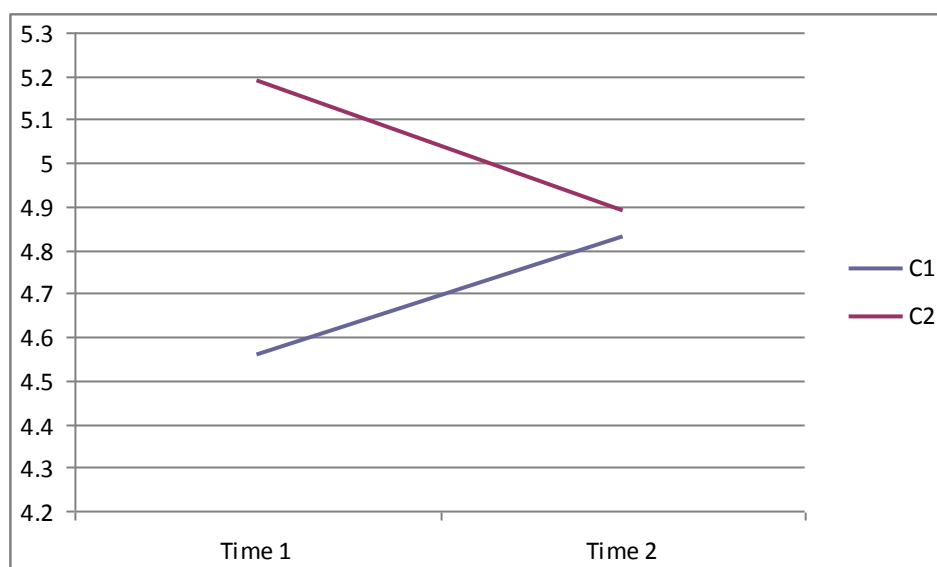
An Independent-Samples T-Test was conducted to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed as a result of undertaking the unit. The results of the Independent Samples T-Test pre-unit and post-unit are shown in Appendix 10 and 11.

Graph 4.40: Category C Question - Females: pre-unit to post-unit



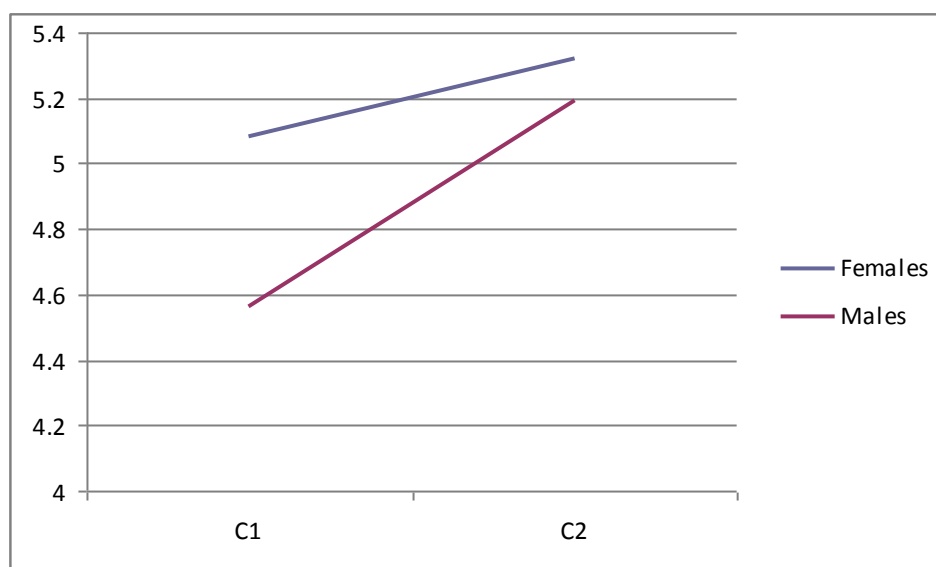
The results of the pre-unit survey questionnaire showed that females strongly agreed that the unit methods would assist in the development of high level academic, critical and reasoning skills (C.1). These results are depicted in graph 4.40. The results regarding question C.2 also showed a higher level of agreement in that the unit methods would assist in the development of useful and relevant, practical work-related skills. However, the level of agreement decreased when the results of the post-unit survey questionnaire were analysed, although both the mean scores were still relatively high.

Graph 4.41: Category C Questions - Males: Pre-unit to post-unit



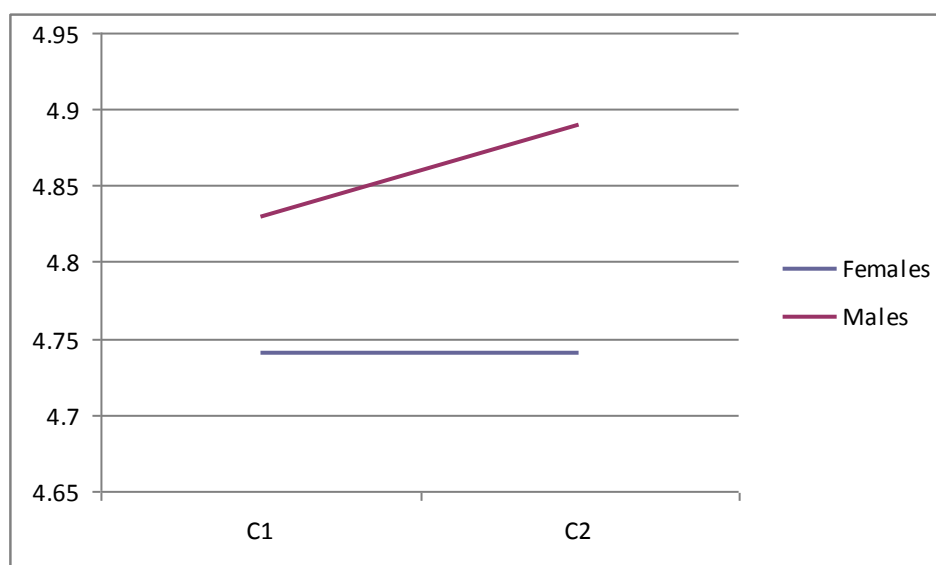
The results of the pre-unit survey questionnaire showed that males agreed that the unit methods would assist in the development of high level academic, critical and reasoning skills (C.1.) The results regarding question C.2 showed a higher level of agreement that the unit methods would assist in the development of useful and relevant, practical work-related skills. The level of agreement increased when the results of the post-unit survey questionnaire were analysed for question C.1 but decreased for question C.2. These results are shown in graph 4.41 above.

Graph 4.42: Gender comparison: pre-unit



Graph 4.42 shows the results for the pre-unit survey questionnaire indicating that the mean for females for both questions C.1 and C.2 is higher females than for males.

Graph 4.43: Gender comparison: post-unit



The results of the post-unit survey questionnaire showed that the mean for females increased from pre-unit to post-unit questionnaire completion. The mean for

males, although high, remained at the same level. These results are shown in Graph 4.43.

An Independent-Samples T-Test was conducted following the recoding of age to Group 1 (20 – 29) and Group 2 (30 +) to compare the confidence in achieving the learning outcomes by the end of the unit according to age for each of the 11 learning outcomes. The pre-unit and post-unit recoded results showed no significant difference in the scores by age (Appendices 6 and 7).

An Independent-Samples T-Test was also conducted following the recoding of age to Group 1 and 2 to compare the level of agreement or disagreement that the teaching and assessment methods contribute to learning. The pre-unit recoded results showed no significant difference in the scores for age with the exception of extra reading and handouts (Appendix 8). There was no significant difference in scores for Group 1 ($M = 4.42$, $SD = .792$) and Group 2 ($M = 4.57$, $SD = 1.397$); $t(41) = -.270$, $p = .795$ (two-tailed), and post-unit Group 1 ($M=4.74$, $SD = .815$) and Group 2 ($M=4.50$, $SD = .850$); $t(41) = .791$, $p = .424$ (two-tailed) (Appendix 9).

An Independent-Samples T-Test was conducted by recoded age to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed as a result of undertaking the unit. The pre-unit and post-unit recoded results showed no significant difference in scores by age (Appendices 10 and 11).

Independent Samples T-Test (post-unit) was conducted by gender to compare the confidence in achieving the learning outcomes by the end of the unit. The pre-unit and post-unit results showed no significant difference in scores by gender (Appendices 12 and 13).

An Independent-Samples T-Test was also conducted by gender to compare the level of agreement or disagreement that the teaching and assessment methods contribute to learning. The pre-unit and post-unit results showed no significant difference in scores by gender (Appendices 14 and 15).

An Independent-Samples T-Test was conducted by gender to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed as a result of undertaking the unit. The pre-unit and post-unit results showed no significant difference in scores by gender (Appendices 16 and 17).

An Independent-Samples T-Test was conducted to compare the confidence in achieving the learning outcomes by the end of the unit according to year of enrolment. The pre-unit and post-unit results showed no significance difference by year of enrolment (Appendices 18 and 19).

An Independent-Samples T-Test was also conducted to compare the level of agreement between first year and second year enrolments, that each of the teaching and assessment methods will assist learning. The pre-unit and post-unit results showed no significance difference by enrolment with the exception of statement B. 7 (In-class multiple choice tests). There was a significant difference in scores pre-unit for first year ($M = 4.04$, $SD = .958$) and second year ($M = 4.73$, $SD = 1.100$); $t(41) = -2.119$, $p = .041$ (two-tailed) (Appendices 20 and 21).

An Independent-Samples T-Test was conducted to compare the level of agreement between first year and second year enrolments that the unit methods will assist in the development of academic and reasoning skills and work-related skills. The pre-unit and post-unit results showed no significant differences in the scores for year of enrolment in relation to the development of academic and reasoning skills and work-related skills (Appendices 22 and 23).

To analyse the data further a model was developed where the response variable employed is the numeric test rather than the grade on the grounds that there is more information in the numeric value as well as the fact that more powerful tests can be applied if the numeric response is employed. The basic model employed assumes that the recorded results can be expressed as the sum of an effect that is intrinsic to the question plus a component that is a characteristic of the student, i.e. for student i ,

$$y_i = M + e_i$$

where y_i is the result,

M is the mean response for question for the population of interest, and

e_i is the deviation of the student's result from the population mean.

The mean M is presumed to possibly be dependent on the one or more of the explanatory variables listed above. Thus for, example, if the result was dependent on whether a student gave a low or a high assessment for question A1.1, a different value would be assigned to M dependent on whether the student gave a low or a high response to question A1.1.

The students are presumed to represent a random selection from the population, and, as is common for models in this situation, the distribution of student effects, that is the e_i values, is assumed to be well approximated by a Normal distribution.

Noting that all explanatory variables are binary variables, a stepwise analysis was employed. This procedure fits each possible explanatory variable separately. Then, if there is one or more variable that shows a significant difference between the two levels, it selects that variable that shows the greatest separation. Subsequently, a model is fitted that includes that variable and tests are conducted by

adding successively each of the remaining variables. If there is another variable that provides additional separation, it is added, and the process continues. If not, then the process stops.

The only pre-unit variable that provided a statistically significant separation of mean results is C.2 ($p=0.007$), that is the expectation that the unit will provide useful work skills. Those students who ‘strongly agreed’ (High) had an average result of 68, whereas those who had lower expectations (Low) had an average score of 75. Thus it would seem that lower expectation is associated with higher performance. The means for low and high categories for all variables are displayed Table 4.44. Any differences observed for other variables could reasonably be explained as sampling variation.

Table 4.44. Mean results for low and high groups for all explanatory variables. Means that are significantly different are shown in bold. *Note that while language shows a large difference, as shown in Table 5, it was not significant because of the small sample size (4) in the 'Y' group.

	Pre-Unit		Post-Unit			Pre-Unit		Post-Unit	
	Low	High	Low	High		Low	High	Low	High
Age	72	69	71	81					
Gender	73	69	72	75					
Year	72	71	73	75					
Language*			72	82					
A1.1	72	70	71	74	B2.1	73	70	73	75
A1.2	73	70	69	75	B2.2	71	72	76	72
A1.3	74	71	73	74	B2.3	74	69	76	72
A1.4	74	69	74	73	B2.4	72	71	75	72
A1.5	73	72	75	73	B2.5	72	72	72	74
A1.6	75	71	74	73	B2.6	73	71	72	74
A1.7	70	73	74	73	B2.7	71	74	72	75
A1.8	72	72	74	73	B2.8	70	72	72	78
A1.9	74	70	74	73	B2.9	72	71	72	76
A1.10	73	71	71	75	C1.2	70	72	73	74
A1.11	71	72	71	73	C2.2	75	68	72	74

The only post-unit variable that provides statistically significant separation of mean results is age ($p=0.006$). Older students, those that are classified in Group 2 (as discussed in 4.3), had an average grade or results of 81, whereas younger students (Group 1) had an average of 71. Any differences observed for other variables could reasonably be explained as sampling variation.

Finally, in comparing pre-unit and post-unit survey questionnaire responses, and as previously stated in 4.2, there were only nine students who are identified as

providing responses to both surveys. This is too few to allow reliable tests for comparisons. However, some analysis was conducted and based on the observed data the numbers of positive and negative movements were the same. One of the nine students showed a relatively large number of positive movements and one showed a relatively large number of negative movements in attitude.

As shown in table 4.45 below, only two of the nine respondents showed a marked change in their level of confidence or agreement. Overall, the positive and negative movements were equally matched. The positive changes recorded by respondent 'jat282' (unique identifying code) were primarily in the Category A questions. The negative changes recorded by respondent 'yu491' (unique identifying code) were in both the Category A and Category B questions, with several of the Category B questions involving changes for more than one level. The number of changes by category and question is provided in the following Tables 4.45, 4.46 and 4.47.

Table 4.45. The number of positive changes and number of negative changes by respondents to the 22 questions asked (Category A = 11; Category B = 9; Category C = 2). The respondents' unique identifying code is shown.

Respondent	chi754	hua407	jat282	kan618	man833	nov047	raz417	yu491	zha802	Total
No. of positive changes	5	4	11	5	7	7	8	1	6	54
No. of negative changes	6	7	3	4	4	0	5	16	8	53

Table 4.46. The number of positive changes and number of negative changes by question for the Category A questions.

Respondent	A1.1	A1.2	A1.3	A1.4	A1.5	A1.6	A1.7	A1.8	A1.9	A1.10	A1.11
chi754	-1	0	1	0	1	-1	0	0	0	1	0
hua407	0	0	-1	0	2	0	-1	-2	0	-1	0
jat282	-1	1	1	1	1	0	2	0	1	-1	1
kan618	0	0	0	2	2	1	0	-1	0	0	0
man833	0	0	1	-1	-1	0	0	-1	0	0	1
nov047	0	0	1	1	1	0	0	0	0	0	0
raz417	1	1	1	1	0	0	0	0	1	0	0
yu491	-1	0	-1	0	-1	0	-1	0	1	-1	0
zha802	-1	0	1	0	1	-1	-1	0	1	0	0
No. of positive changes	1	2	6	4	6	1	1	0	4	1	2
No. of negative changes	4	0	2	1	2	2	3	3	0	3	0
% showing change	56%	22%	89%	56%	89%	33%	44%	33%	44%	44%	22%

Table 4.47. The number of positive changes and number of negative changes by question for the Category B questions.

Respondent	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B2.8	B2.9
chi754	-1	-2	-1	0	0	0	2	1	-1
hua407	-1	0	0	-1	2	-1	0	1	0
jat282	0	0	0	2	1	1	0	0	0
kan618	0	0	0	-1	-1	-1	0	1	0
man833	1	0	0	0	1	1	2	1	0
nov047	0	0	0	1	0	1	0	2	0
raz417	2	-1	-1	-1	1	0	-1	0	1
yu491	-2	-3	-2	-1	-1	-1	-1	-1	-2
zha802	-1	0	0	1	-1	5	1	0	-1
No. of positive changes	2	0	0	3	4	4	3	5	1
No. of negative changes	4	3	3	4	3	3	2	1	3
% showing change	67%	33%	33%	78%	78%	78%	56%	67%	44%

Table 4.48. The number of positive changes and the number of negative changes by question for the Category C questions.

Respondent	C1.1	C1.2
chi754	0	0
hua407	3	0
jat282	1	-1
kan618	0	1
man833	0	-1
nov047	0	1
raz417	-1	0
yu491	-2	-2
zha802	-1	-1
No. of positive changes	2	2
No. of negative changes	3	4
% showing change	56%	67%

4.7 FACTOR ANALYSIS

Exploratory Factor Analysis was used to gather information about the inter-relationships among the variables (Pallant, 2007). Factor analysis is a method used to examine any underlying constructs within the responses and across a number of variables such as learning outcomes, teaching and assessment methods and other work-related skills (DeCoster, 1998). Factor analysis is performed by examining the pattern of correlations (or covariances) between the observed measures. Measures that are highly correlated (either positively or negatively), are likely influenced by the same factors, while those that are relatively uncorrelated are likely influenced by different factors (DeCoster, 1998).

Factor Analysis was deemed suitable for the data set even though the sample size was small and the data skewed to the high end of the scale. Given that this is an exploratory piece of research it is felt that there is some scope for using Factor Analysis to see if there are any latencies in the data that are not obvious using other techniques. Often Likert Scales are treated as ordinal but can be treated as interval, and as referred to by Bryman and Cramer (2005:145), 'it has been suggested that parametric tests can also be used with ordinal variables since tests apply to numbers and not to what those numbers signify', and in this instance Likert Scale data is being treated as parametrics data.

Although research suggests that factors obtained from small data sets do not generalise as well as those derived from larger samples, Tabachnick and Fidell (cited in Pallant, 2007) concede that a smaller sample should be sufficient if solutions have several high loading marker variables (above 0.80). Other authors recommend that the overall sample size is not of concern, rather the ratio of subjects to items (Pallant, 2007).

The learning outcomes, teaching and assessment methods and work-related skills on the questionnaire were subjected to principal component analysis (PCA) using PASW (Predictive Analytics SoftWare) Version 18. Prior to performing PCA, the suitability of data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many co-efficients of 0.3 and above. According to Pallant (2007), at least some correlations of $r = 0.3$ or greater should be shown for factor analysis suitability. Additionally Bartlett's test of sphericity should be statistically significant at $p < 0.05$ and the Kaiser-Meyer-Okin (KMO) value should be 0.6 or above. On analysis of this data, the KMO value was 0.625 exceeding the recommended value of 0.6 and Bartlett's Test of Sphericity reached statistical significance supporting the factorability of the correlation matrix.

The Principal Components Analyses revealed the presence of 5 components with eigenvalues exceeding 1, explaining 39%, 12%, 9%, 6% and 5% of the variance respectively. These 5 components explain a total of 71% of the variance. An inspection of the screeplot revealed a clear break after the second component. Using the screetest, it was decided to retain two components for further investigation. The two-component solution explained a total of 51% of the variance with component 1 contributing 39% and component 2 contributing 12%. The total variance results are presented in Appendix 13.

The Component Score Co-efficient Transformation Matrix presented as Appendix 14 shows the strength of the relationship between the five factors – in this case the value is quite low at -.012. Given the correlations are quite low, we would expect very similar solutions from both Varimax or Oblimin rotations (Pallant, 2007) In this instance Varimax rotations were used.

The Component Matrix (Appendix 15) shows the unrotated loadings of each of the items on the two components. The results show that most of the items load quite strongly (above .4) on the first two components and very few items load on components 3 upwards. This also suggests that a two-factor solution is more appropriate.

When considering the Varimax Rotated Component Matrix – Factor 1, as shown in bold in Table 4.48, the loading seems to suggest that Factor 1 is related to the theoretical concepts and frameworks of the unit being investigated. This is supported by Focus Group comments.

Student 10: 'Analysis helped me to understand how to link together the theory and practice'.

Student 9: 'I think the theory was reinforced through case studies and practice'.

Whereas when considering the Varimax Rotated Component Matrix – Factor 2, as shown in Table 4.49, the loading seems to suggest that Factor 2 is related to the teaching and assessment methods specifically tutorials, lectures, the lecturer's teaching style, the CD-ROM learning resource and the case study workshops. The tutorials and case study workshops particularly focus on the practical application of theoretical concepts and frameworks. These results are supported by Focus Group comments:

Student 4: 'The models used by the lecturer were very useful for first semester students'.

Student 3: 'The CD was useful for the mini-lectures also good for reinforcement by use of examples'.

Question C. 1 (High level academic, critical and reasoning skills) is loaded low for both Factor 1 and Factor 2 which suggests that this is not as applicable in terms of theoretical concepts and frameworks and their practical application. Question C.2 (Development of useful and relevant practical work-related skills), is loaded highly for both Factor 1 and Factor 2 in terms of both theoretical concepts and frameworks and their practical application shown as bold in Table 4.49.

Table 4.49: Varimax Rotated Component Matrix – Factor 1

	Component	
	1	2
<i>Apply this knowledge to case studies to reach reasoned conclusions about strategy.</i>	.917	-.005
<i>Explain strategy in terms of the complexity and uncertainty facing business organisations.</i>	.815	.115
Development of useful and relevant practical work-related skills (C2)	.690	.466
<i>Integrate conceptual approaches to strategic management and write about real world experiences</i>	.679	.207
<i>Draw conclusions from strategy data.</i>	.667	.097
<i>Explain central theory in strategic management.</i>	.654	.313
<i>Generate appropriate responses to key issues in strategic management.</i>	.598	.169
<i>Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.</i>	.560	-.032
<i>Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations.</i>	.514	.248
<i>Apply strategic management principles to present or future work experiences</i>	.424	.466
<i>Lectures</i>	.366	.788
<i>Present well-reasoned written arguments</i>	.339	.168
<i>Demonstrate good written communication in English</i>	.188	.198
Development of high level academic, critical and reasoning skills (C1)	.159	.137
<i>Extra Readings and handouts</i>	.157	.482
<i>Case study workshops</i>	.156	.515
<i>Lecturer's Teaching Style</i>	.145	.802
<i>Case study essay assignment</i>	.081	-.075
<i>CD Learning Resources</i>	.078	.642
<i>Tutorials</i>	.070	.831
<i>Prescribed Text</i>	.016	.187
<i>In-class multiple choice test</i>	.003	.111

Note: Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

A Rotation converged in 8 iterations.

*Note: Sorted from highest to lowest.

Table 4.50 : Varimax Rotated Component Matrix - Factor
2

	Component	
	1	2
<i>Tutorials</i>	.070	.831
<i>Lecturer's Teaching Style</i>	.145	.802
<i>Lectures</i>	.366	.788
<i>CD Learning Resources</i>	.078	.642
<i>Case study workshops</i>	.156	.515
<i>Extra Readings and handouts</i>	.157	.482
<i>Apply strategic management principles to present or future work experiences</i>	.424	.466
Development of useful and relevant practical work-related skills (C2)	.690	.466
<i>Explain central theory in strategic management.</i>	.654	.313
<i>Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations.</i>	.514	.248
<i>Integrate conceptual approaches to strategic management and write about real world experiences</i>	.679	.207
<i>Demonstrate good written communication in English</i>	.188	.198
<i>Prescribed Text</i>	.016	.187
<i>Generate appropriate responses to key issues in strategic management.</i>	.598	.169
<i>Present well-reasoned written arguments</i>	.339	.168
Development of high level academic, critical and reasoning skills (C1)	.159	.137
<i>Explain strategy in terms of the complexity and uncertainty facing business organisations.</i>	.815	.115
<i>In-class multiple choice test</i>	.003	.111
<i>Draw conclusions from strategy data.</i>	.667	.097
<i>Apply this knowledge to case studies to reach reasoned conclusions about strategy.</i>	.917	-.005
<i>Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.</i>	.560	-.032
<i>Case study essay assignment</i>	.081	-.075

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

A Rotation converged in 8 iterations.

*Note : Sorted from highest to lowest.

4.8 QUALITATIVE DATA

Appendix 2 provides a transcript of the focus group discussion whilst Appendix 3 gives a summary of the qualitative data responses collected from the pre-unit and post-unit questionnaire. The respondents confirmed the data from the quantitative analysis specifically supporting the manner in which the knowledge of the main

theoretical concepts and frameworks relating to the unit's key themes was presented using valuable real world examples of how skills can be applied (Question C.2 loaded high for both Factor 1 and Factor 2). The respondents did not highlight the development of high level academic, critical and reasoning skills (C.1 loaded low for both Factor 1 and 2).

As noted in 4.7, The Varimax Rotated Component Matrix – Factor 2, and as shown in Table 4.49, suggest that Factor 2 is related to the teaching and assessment methods specifically tutorials, lectures, the lecturer's teaching style, the CD-ROM learning resource and the case study workshops. The tutorials and case study workshops particularly focus on the practical application of theoretical concepts and frameworks. The qualitative feedback in both Appendix 2 and Appendix 3 confirm the value of the lecturer's teaching style; the case study workshops and the CD-ROM learning resource as a tool to assist in assignment preparation and as a preview of the lectures. The tutorials received mixed reviews by respondents. Some students indicated that they did not expect to enjoy these in their pre-unit questionnaire and these comments were confirmed in the post-unit questionnaire.

CHAPTER 5

DISCUSSION

Chapter 5: Discussion

5.1 INTRODUCTION

The purpose of this chapter is to discuss the data collected and to link the data to the theoretical discussion in Chapter 2: Research Issues. The research issues of significance include that while the individual, school, faculty and institution has its specific contextual impacts on teachers, teaching, students and student learning, there are complex societal, political, economic, technological and demographic change forces that also impact on teaching in the tertiary education environment. There is a rapid growth in hybrid flexible delivery course offerings but limited understanding of this delivery method affects the level of critical engagement and student learning experiences.

The discussion in this chapter provides useful insights into the relationship between critical engagement and hybrid flexible delivery, and the factors that may affect levels of critical engagement (Arbaugh, 2000; Kirkpatrick & McLaughlin, 2000; Oliver & Omari, 2001; Bain, 2011). This chapter will also outline some implications of this research for current theory and practice. Suggested recommendations for future research are also presented.

As outlined in 1.3, for the purpose of this research students' perception of their learning engagement is being measured; that is their success in achieving 'critical engagement' as the learning outcome embedded in the Unit design and required to achieve the specified unit learning outcomes. Student's perception of their learning engagement is also measured in three additional ways. Firstly, by the changes in their confidence levels in achieving the unit learning outcomes at pre-unit and post-unit. Secondly, by the change in their level of agreement, at pre-unit and post-unit, regarding the degree the teaching and assessment methods used

contribute to learning. Thirdly, by the degree of change regarding whether the unit teaching and assessment methods assist in developing high level academic, critical reasoning skills and useful practical work-related skills. The research intent is to explore:

To what extent are students critically engaged by hybrid flexible delivery?

What aspects of hybrid flexible delivery most affect the level of critical engagement?

Does the level of critical engagement differ according to age, gender, first language, year of enrolment or the level of student prior achievement?

The research sample had a high proportion of respondents in the 20 – 29 year old age category (Group 1), female and enrolled in the first year of their post-graduate studies. Data was collected on the role of language and the level of prior student achievement which is presented in Tables 5 and 6 in Chapter 4. However, as the sample for this research was small, the data does not provide a reliable assessment on the role of these factors in the level of critical engagement in hybrid flexible delivery. There was no significant difference on the level of critical engagement by year of enrolment.

Although this research endeavours to determine which aspects of hybrid flexible delivery most affect the level of critical engagement, it is important to note that often research is difficult to control given there are different variables influencing the educational outcomes such as pedagogical approaches, methods of assessment and instructor and student characteristics (Volery & Lord, 1999 cited in Ladyshevsky, 2004). Therefore where appropriate other factors that may have impacted on the achievement of learning outcomes and the level of critical engagement are identified. Also, the data analysis resulted in a number of non-significant results. Non-significant results are also conceptually informative in the

sense of forwarding knowledge in a field and these results, where appropriate, have been discussed (Holley & Oliver, 2010).

5.2 OVERVIEW OF THE SIGNIFICANT RESULTS OF THE RESEARCH

Respondents pre-unit and post-unit expressed a high level of confidence in achieving the learning outcomes which is reflected in the high level of results in the Unit (depicted in Chapter 4, Table 4.43). Given that students' perception of their learning engagement is being measured; that is their success in achieving 'critical engagement' as the learning outcome embedded in the Unit design and required to achieve the specified unit learning outcomes, this research therefore shows critical engagement can be achieved in hybrid flexible delivery. However, as noted in the study limitations, it is unclear if this is a unit where we would expect high levels of critical engagement. It is unclear if this level of critical engagement would occur in other similarly designed units or if the 'flexibilisation' in this unit was designed to specifically encourage critical engagement. Given these limitations it is therefore difficult to conclude from this research the extent that hybrid flexible delivery facilitates critical engagement.

All respondents in this research expressed a high level of agreement that the teaching and assessment methods assisted their learning and contributed to critical engagement. They also expressed a high level of agreement that the hybrid flexible delivery methods assisted in the development of academic and work-related skills.

Overall students had a higher level of confidence in achieving the learning outcomes which focused on theoretical concepts and frameworks and the development of useful and relevant practical work-related skills (in terms of the application of strategic management principles to current and future work experiences).

This study suggests that the hybrid flexible delivery methods used have contributed to facilitating critical engagement. It appears that the teacher in designing the unit has considered the whole course and ‘weaved through’ rather than ‘tacked on’ hybrid flexible delivery approaches (De George-Walker & Keeffe, 2010:3). The teacher appears to have accommodated a wide variety of students via multiple means of representation, expression and engagement (Rose & Wasson, 2008). The use of Bloom’s taxonomy as a framework for developing learning activities as part of the unit design may have contributed to facilitating critical engagement. It is unclear if more personalised and individualised methods of delivery negotiated with students that match individual student needs, and academic orientation, would have impacted on the level of critical engagement (Holley and Oliver, 2010). It does appear that the opportunity for students to engage in experiential exercises, discuss and collaborate with other students may have led to developing a deeper understanding of new concepts and led to critical engagement. (Leask, 2011). Further research would need to be undertaken to support this assertion.

In this unit, the community of inquiry (Garrison et al., 2004) was established through the case study workshops and the teacher’s role and teaching style. The unit used the flipped classroom approach through experiential questions and answers, and mini lectures narrated by the teacher leading to activities that encouraged discovery learning (Hart, 2002). The case study workshops offered student and teacher-centred learning experiences that were experiential, group-based and provided a high degree of social interaction which may have further facilitated critical engagement. Although tutorials are seen by students as a valuable element of the learning process (Drennan et. al., 2005), and an important part of the didactic method, in this study students indicated that the structure of the tutorials did not support the learning experience.

The Factor Analysis resolved into two factors, one of which was interpreted as theoretical concepts and frameworks the other about teaching and assessment. So when asked about the development of useful and relevant and practical work-related skills, this loaded across both the factors and indicated that both practical and theoretical elements need to be incorporated in the design of hybrid flexible delivery units.

5.3 CHANGE IN THE LEVEL OF CONFIDENCE IN ACHIEVING THE LEARNING OUTCOMES

There are a complex set of factors influencing student expectations of their tertiary education experiences and Section 5.3 looks at some of the issues and explanations with areas that require further investigation (Shah, 2010).

High Distinction students generally showed an increase in their level of confidence in relation to statements regarding the achievement of the learning outcomes that focused on applying theoretical concepts and frameworks and developing practical skills, but students who achieved a Credit generally showed a decrease in their level of confidence. This result supports evidence that suggests that hybrid flexible delivery is the preferred delivery method particularly for students who achieve better than average results (Zuvic-Butorac et al., 2011). While the data did not investigate individual learning styles, High Distinction students who showed an increased in the level of confidence, may have found that the hybrid flexible delivery methods complimented their learning styles, and Credit students may have found that elements of the hybrid flexible delivery method did not reflect their preferred learning styles (Zapalska & Broznik, 2007).

The decrease in the level of confidence by Credit students could be attributed to some students lacking experience in the area of strategic management (Cook & Leckey, 1999) or because they did not adopt a study habit that could help them to

carefully interpret the requirements of the learning tasks (Lei, 2010). An alternative reason for students' lack of confidence could be that a large number were in the 20 – 29 year old age cohort (Group 1), and in their first year of post-graduate studies. Therefore they may have lacked confidence in their abilities (Ramsay, Barker & Jones, 1999).

Psychological capital could also influence Credit students who had a decrease in the level of confidence in achieving the learning outcomes (Luthans et al. 2004). Research suggests that students perform better and are more motivated when they have high levels of the four psychological capacities of confidence, hope, optimism and resilience (Luthans et al. 2004). It is conceivable that Credit students lacked confidence or resilience, as a result of feedback received from the tutor. Credit students may not set realistic goals in relation to preparing for lectures, case-study workshops, tutorials or assignments. These students may have lacked optimism and did not attribute positive events, such as a good assignment mark, to internal causes (Luthans & Youssef, 2004). These students may have needed to develop more resilience to respond to change, for example recognising that different units will employ different delivery methods (Luthans & Youssef, 2004).

Although results in this Unit were at the high end of the scale, students who achieved a High Distinction had a decrease in their level of agreement from pre-unit to post-unit regarding the ability to demonstrate good written communication in English. This could be attributed to their first language being other than English or poor writing skills, but this decrease only applied to students who achieved a High Distinction. Other research does not support this result. In a study conducted to compare traditional face-to-face and hybrid flexible delivery methods in a business communications class, an improvement in writing skills was found in students who

participated in the hybrid flexible delivery course, particularly those whom English is a second language (Sauers & Walker, 2004 cited in Selim, 2010).

The results in this research regarding the development of written communication could be because students had high expectations regarding their results and the reality or actuality of writing at post-graduate level showed their expectations were possibly not realisable. Students in hybrid flexible delivery units may see their writing skills improve as much as those in face-to-face delivery, if the instructional materials meet the needs and learning styles of the learner and if students have the opportunity to build a relationship with the teacher early in the learning experience (Hart, 2002). It is therefore possible that instructional materials may not have suited specific learning styles in this unit (Sauers & Walker, 2004 cited in Arbaugh, 2009).

Students who achieved a Pass in this unit recorded an increase in their level of confidence, from pre-unit to post-unit across all the statements relating to learning outcomes, particularly in relation to their confidence in demonstrating good written communication in English. They also felt the Unit assisted in their language development.

It is conceivable that students who have had previous positive educational or work experience and/or a high degree of conscientiousness may show an increase in their level of confidence in achievement of the learning outcomes that focused on applying theoretical concepts and frameworks, developing practical skills and in demonstrating good written communication in English (Holley & Oliver 2010). Being conscientious however, may not necessarily lead to good academic outcomes, and higher levels of confidence in achieving the learning outcomes, although it possibly could (Bain, 2011). It is also feasible that students with English as a second

language, may see the learning experience as an opportunity to develop language skills and therefore these students focused specifically on learning outcomes that foster the development of communication skills (Ryan 2005). It could also be true that students who had a high level of confidence in achieving the learning outcomes responded positively to the teacher's emphasis of Bloom's Taxonomy as a framework for developing critical thinking (Athanasios, 2003).

5.4 CHANGE IN THE LEVEL OF AGREEMENT THAT TEACHING AND ASSESSMENT METHODS CONTRIBUTE TO LEARNING

Students indicated a high level of agreement that the teaching and assessment methods contributed to learning and facilitated critical engagement with only small changes in the level of confidence from pre-unit to post-unit. This high level of agreement could be due to the use of constructivist approach to learning adopted by the teacher (Garrison & Vaughan, 2008) or that students actively participated in critical thinking and experiential exercises, for example the case study workshops (Eggen et. al., 2001, Moallem, 2001, Jonnassen, Peck & Wilson, 1999). Students indicated a high level of agreement that the teacher contributed to learning. Qualitative evidence from students suggested that the teacher facilitated productive discussions through the case study workshops (Anderson et al. 2001). This high level of agreement could also be attributed to the students' perceived value of a teaching presence (in a community of inquiry), where support was provided to construct meaning and confirm understanding of key issues (Garrison et. al., 2004).

One particular element of hybrid flexible delivery favourably noted by focus group comments, regarding the CD-ROM learning resource: 'the CD-ROM was useful in terms of mini lectures... also good reinforcement by use of examples'. This student feedback was also in the qualitative data from the questionnaire, 'The CD had relevant sections to provide information about the next lecture so I knew what

to expect’. This could be evidence of the value of the flipped or reverse classroom approach allowing students to complete learning tasks before the class allowing more time for experiential or problem-solving activities in class (Hart, 2002).

There are other factors that could have contributed to the effectiveness of CD-ROM learning resource in this unit. Students with an internal locus of control, who are more autonomous and innovative learners, may perceive the CD-ROM learning resource as more useful than students with an external locus of control (Drennan et. al., 2005,). However, only High Distinction and Pass students recorded a small increase in their level of agreement that the CD-ROM learning resource contributed to their learning so these findings would need to be further explored.

Interestingly, respondents who achieved a Credit recorded an overall decrease in the level of agreement from pre-unit to post-unit that the teaching and assessment methods contributed to learning, although their response was still at the high end of the scale. This could be attributed to expectations students had, but not achieving the result (grade) they may have anticipated, and as a result they had less agreement about the hybrid flexible delivery methods and their contribution to learning (Shah, 2010). As previously noted students who achieved a High Distinction recorded an overall increase in the level of agreement that the teaching and assessment methods contributed to learning. The level of agreement, with respect to high performing students, could be because these students are more conscientious, hardworking and achievement oriented (Sheard, 2009).

Although the teaching style was seen by students as contributing to learning, students had a lower level of agreement that the tutorials contributed to learning, particularly respondents who achieved a Distinction or Credit who recorded a significant decrease in the level of agreement. As face-to-face tutorials are seen as an effective learning environment by students (Sweeney & Ingram, 2001), the results of

this research study may relate to the structure and delivery of these tutorials, as evidenced in the qualitative feedback.

In summary, students in this research agreed that hybrid flexible delivery method contributed to learning. The changes from pre-unit to post-unit could be attributed to a number of factors such as the contribution of a teaching presence that developed a community of inquiry through productive discourse or the use of a flipped or reverse classroom approach. As each level of Bloom's taxonomy appears to have been 'embedded' within the Unit learning outcomes this could have encouraged students to develop their cognitive skills and contributed to learning and critical engagement (Anderson et. al., cited in Simkin & Kuechler, 2005).

Whilst perceptions of technology are important, the need for students to develop an autonomous learning style and to display conscientious and hard-working behaviours could also play a vital role in facilitating critical engagement. Students with more positive attitudes towards technology show higher performance than students having less positive attitudes towards technology (Sankaran et. al., 2001). This research suggest that performance differences and the level of critical engagement may also be attributed to individual student learning strategies, learning styles and motivation and to the characteristics of the chosen delivery and assessment method (Sankaran & Bui, 2003).

5.5 CHANGE IN THE LEVEL OF AGREEMENT REGARDING ACADEMIC AND WORK-RELATED SKILLS DEVELOPMENT

Students indicated that the teaching and assessment methods contributed to the development of academic and work-related skills with minimal change in the level of confidence from pre-unit to post-unit. Students who achieved a High Distinction and Pass recorded an overall increase in the level of agreement in the development of high level academic, critical reasoning skills. High Distinction students continued

to perform well and those at a Pass standard, who perhaps had the most to benefit and expect to gain from their learning experience, increased their level of agreement.

Students who achieved a Credit recorded an overall decrease in their level of agreement. Perhaps hybrid flexible delivery methods employed did not reflect preferred learning styles of Credit students (Dowling et. al., 2003; Nemanich, Banks and Vera, 2009; Zapalska & Broznik , 2007; Sims & Sims 1995). These students may not have employed the appropriate learning strategies or lacked achievement motivation (Sankaran & Bui, 2003). It is feasible that students who recorded a Credit may have been focusing on maintaining this standard and their decrease in the level of agreement could be related to other non-achievement motivational factors (Sankaran & Bui, 2003).

A result of statistical significance is that respondents with lower expectations that the unit methods will assist the development of academic and practical work-related skills, are associated with higher performance and results. As previously noted this could be because lower performing students had the most to gain from the learning experience and this may have influenced their engagement. Given that the results of the Factor Analysis showed that the development of useful and relevant practical work-related skills loaded high for both Factor 1 and 2, this could indicate that these students responded to both the practical and theoretical elements of the Unit.

In summary the results show that students agreed that the teaching and assessment methods contributed to the development of academic and work-related skills with minor changes in the level of agreement from pre-unit to post-unit. These minor changes could possibly be attributed to student learning styles (Nemanich,

Banks and Vera, 2009); learning strategies employed; the level of motivation or student focus on maintaining a standard of performance (Sankaran & Bui, 2003).

5.6 AGE AND THE LEVEL OF CRITICAL ENGAGEMENT

The results of this research showed overall age is not a significant factor to predict critical engagement in hybrid flexible delivery with the exception of older students (Group 2: 30 years of age and older) who had a higher level of confidence in achieving the learning outcomes and a higher level of performance or result than younger students (Group 1: 20 – 29 years of age). Older students in the focus group commented on the value of the CD-ROM particularly the case studies which were seen as a useful preview to the next lecture; an example of the flipped or reverse classroom (Hart, 2002).

Other research supports the view that older students generally outperform young students in first-year academic performance (Cantwell, Archer & Bourke, 2001 cited in Sheard, 2009) and older students do better than younger students in polytechnics and tertiary education institutions (Richardson et. al., 2003). Higher performance by age may be due to other factors such as higher levels of achievement orientation, and general motivation. The individual level of conscientiousness, willingness to work, persistence, critical reflection and internal locus of control could also contribute to the performance of older students but these factors would need to be tested (McKenzie & Gow, 2004 cited in Sheard, 2009). Additionally some research suggests older students often see education as a catalyst for change in their lives and feel pressure to succeed. This and could explain why older students in this current research had higher than average scores across both questionnaires (Shanahan, 2006).

Conversely, other studies have produced different results. Ladyshefsky (2004), suggests age and gender do not appear to moderate performance in any way except for those students less than 33 years of age who do better on average in flexibly delivered units.

In summary, age has not been shown in this research as a significant factor to predict critical engagement with the exception of older students (30+ years of age). Other research points to older students performing better in tertiary education, but further research would need to be undertaken to investigate if there is a significant relationship between age and the level of engagement in hybrid flexible delivery.

5.7 GENDER AND THE LEVEL OF CRITICAL ENGAGEMENT

The findings of this research indicate that there was no significant difference by gender in performance and the level of critical engagement when hybrid flexible delivery methods were used. However, this is not supported by other research. Arbaugh (2000) found a moderately significant difference where males have been reported to have more difficulty interacting in the learning environment and where this interaction difficulty is seen as a significant predictor of participation.

It is reported that males find electronic communication easier to use for information dissemination but more difficult to use for interaction among fellow students and this may impact on performance and the level of critical engagement (Arbaugh, 2000). These interaction challenges could also apply in this research where males in (post-unit) indicated the teaching and assessment methods, that were seen as contributing most to learning, were those that did not require interaction or collaboration. These teaching and assessment methods were the prescribed textbook, extra readings and handouts, in-class multiple choice tests and the case study assignment. However, other research reports that male's rating of computer

self-efficacy, perceived usefulness, perceived ease of use and behavioural intention to use flexible or hybrid flexible delivery methods are all higher than females (Ong & Lai, 2006). Their research also revealed that male's perception of perceived usefulness was more significant and more salient than females in determining behavioural intentions to use e-learning as part of a flexible or hybrid flexible delivery course (Ong, & Lai, 2006).

Females appear to adapt more easily to tertiary education and are generally more motivated towards and readily engage with academic goals and activities (Smith, 2004). Other research suggests females display a more self-determined motivational profile than males and adhere to study schedules (Sheard, 2009).

Other studies note differences in communication patterns between males and females where males tend to communicate on the basis of social hierarchy and competition whereas females tend to more network-oriented and collaborative in hybrid flexible delivery (Kilbourne & Weeks, 1997 cited in Arbaugh, 2000). This is interesting as the results of this current research suggest that males (pre-unit and post-unit) had a higher level of confidence in achieving the learning outcomes than females, although this difference was not statistically significant. Post-unit the mean for both genders was high and similar with small differences in relation to the level of agreement that the teaching and assessment methods would contribute to learning. This suggests that hybrid flexible delivery methods, including those which required student collaboration and interaction, do not have a negative effect on performance and critical engagement. It may be the mix of strategies satisfied both male and female learning styles and this is something that deserves more research.

In summary this research has not produced conclusive evidence that there is a relationship between gender and the level of performance or critical engagement,

using hybrid flexible delivery. However, other research suggests that females may outperform males in situations around acquiring new information in building networks and collaborative relationships vital to successful hybrid flexible delivery, again more research is needed in this area (Sheard 2009).

5.8 CONCLUSION

Whether we are interested in creating more effective learning experiences, increasing flexibility or reducing the cost of learning, it is important for tertiary educators to understand the extent students are critically engaged by the use of hybrid flexible delivery methods and what factors affect the levels of critical engagement. There is ongoing debate about the meaning of critical engagement, how it is best measured, why it is important in the context of tertiary education and which delivery methods best facilitate it. This research has contributed to the ongoing debate about the value of hybrid flexible delivery in facilitating critical engagement by examining the quality of the learning experience in a unit delivered using this method and exploring a number of factors that may affect the levels of critical engagement.

One approach to defining and operationalizing critical engagement has been used in this study. Hybrid flexible delivery been defined for this study as a convergence or blended mix of the traditional face-to-face and flexible delivery methods as shown in Section 2.6. Due to the small sample size, generalisations cannot be made about the findings in this study. It is also not clear if the level of critical engagement in this unit would be the same or greater in another unit using hybrid flexible delivery methods. It is also not clear that the unit being considered has sufficiently developed 'flexibilisation' in its design to facilitate critical engagement or if critical engagement was the intention of the overall unit design. There is however, evidence that Bloom's Taxonomy was used in the unit's development to facilitate high order thinking skills required for critical engagement.

The results showed students had a high level of confidence in achieving the learning outcomes which is also reflected in their performance in the Unit with higher performing students particularly noting the benefit of the hybrid flexible delivery. Conversely it was found lower performing students were less confident in being critically engaged and less likely to agree that hybrid flexible delivery methods contributed to critical engagement. The exception was Pass students who showed an increase in their level of critical engagement from the beginning to end of the unit.

The results support the literature that suggests hybrid flexible delivery is the preferred delivery method for students who achieve better than average results (Zuvic-Butorac et al., 2011). It can therefore be concluded that differences in confidence levels and the performance of students seems to impact on the level of critical engagement. It could be concluded that students generally need the opportunity to build a relationship with the teacher early in the learning experience to achieve critical engagement (Hart, 2002).

The results suggest that the teacher's presence, in developing a community of inquiry, and the use of case study workshops, provided support to construct meaning and confirm understanding of the key issues in this unit (Garrison et al., 2004). The literature suggests it is important for the teacher to consider the whole unit and 'weave through' rather than 'tack on' hybrid flexible delivery approaches and adopt the constructivist approach to learning. It could be concluded that there is a relationship between the level of critical engagement and the teacher-student relationship. It could also be concluded that unit design, which focuses on both theoretical and practical work-related skill development and integrates hybrid flexible delivery approaches may facilitate critical engagement (Zapalska & Broznik, 2007).

This study has found that age is not a significant factor associated with the level of critical engagement in hybrid flexible delivery with the exception of older students were more critically engaged than younger students. The literature says that higher performance by age may be due to internal factors such as conscientiousness, internal locus of control or pressure to succeed. Therefore it could be concluded that there is a relationship between age, critical engagement and hybrid flexible delivery methods but only for older students where other factors aside from the delivery method may influence the level of engagement.

This study also found there was no significant difference in performance and the level of critical engagement by gender when hybrid flexible delivery methods are used. Males had a higher level of confidence in achieving the learning outcomes than females, but this was not statistically significant. Other research suggests that females may outperform males in situations acquiring new information and in building networks and collaborative relationships vital to successful hybrid flexible delivery (Arbaugh, 2000). Therefore, it could be concluded that although there are no significant differences to the level of critical engagement by gender, males may prefer learning experiences that require less collaboration and interaction. It could be concluded that a mix of learning strategies to satisfy both males and female learning styles may assist critical engagement in hybrid flexible delivery (Biggs & Tang, 2007).

The number of respondents limited reliable assessment of the role of language and prior student level of achievement on critical engagement and there was no significant difference in performance and the level of critical engagement by year of enrolment.

In order to facilitate critical engagement teachers in the tertiary education environment need to know how students learn, how they perceive and process information and how they apply information to new situations. This knowledge can inform the appropriateness of a delivery method and facilitate critical engagement. However, any teaching method adopted hybrid flexible delivery needs to include both practical and theoretical elements in its design

5.9 IMPLICATION OF THE RESEARCH FOR CURRENT THEORY AND PRACTICE

This research is significant and innovative for both academic and practical reasons. In academic terms, research into the relationship between hybrid flexible delivery methods and the level of critical engagement is in its infancy. The gap in research is of particular importance as the social context of higher education changes. This research has contributed to identifying what elements of hybrid flexible delivery affect the level of critical engagement and has shown that the hybrid flexible delivery method can facilitate critical engagement.

From a practical perspective it is evident that to foster critical engagement hybrid flexible delivery methods need to be personalised and individualised, to match students' academic orientation and individual needs (Biggs & Tang, 2007). Teachers need to ensure that theory is relevant and useful to students and is used to challenge and extend ways of thinking (Bunnell et. al., 2008; Cameron, 2009). To encourage critical engagement teachers need to support students to develop autonomous learning styles and identify appropriate learning activities that reflect individual learning styles (Biggs & Tang, 2007; Sankaran et. al., 2001). The design of a hybrid flexible delivery unit needs to incorporate both theoretical and practical elements and teachers need to consider the whole course and a 'weaving through' rather than 'tacking on' of hybrid flexible delivery approaches.

The relationship between the teacher (or tutor) and students needs to be fostered as well as the development of a social presence, with open communication and affective, personal connections between students and other(s) (Anderson et al. 2001; Miulecky, 1998 cited in Bonk & Graham 2006; Garrison et. al., 2004; Hart, 2002). The use of conversational technologies could further enhance the established community of inquiry (Brower, 2003 cited in Arbaugh et. al., 2003).

From a theoretical perspective, it has been found that Bloom's Taxonomy is a useful 'lens' for understanding the extent to which learning activities produce critical engagement in hybrid flexible delivery (Athanassiou et. al., 2003). When each level of Bloom's taxonomy is 'embedded' within the Unit learning outcomes, this encourages students to develop their cognitive skills and it contributes to learning and critical engagement (Anderson et. al., cited in Simkin & Kuechler, 2005). Through the use of Bloom's Taxonomy (Figure 2.5) the teacher and tutor could explain the correlation between the learning outcomes, the corresponding cognitive processes of Bloom's Taxonomy and each teaching and assessment method (Anderson et. al., 2001; Krathwohl, 2002). Bloom's taxonomy can be used to encourage the locus of control to move to the student from the teacher to foster critical engagement (Biggs and Tang , 2007) so 'students can be encouraged to think at higher levels, using the taxonomy of cognition and therefore be critically engaged' (Athanassiou et. al., 2003:551).

From a practical perspective mapping the learning outcomes of a unit against the cognition levels of development using Bloom's Taxonomy, can help students and teachers understand the student behaviour which may bring about a more student-centred classroom, reinforcing that learning is a 'search for meaning by the student constructing knowledge rather than passively receiving it; shaping as well as being shaped by experiences' (Athanassiou et. al., 2003:551).

6.0 RECOMMENDATIONS FOR FUTURE RESEARCH

This research has contributed to the body of knowledge on the extent students are critically engaged by hybrid flexible delivery methods and which aspects of hybrid flexible delivery most affect their level of critical engagement. As the number of respondents was limited, reliable assessment of the role of language, year of enrolment and prior student level of achievement on critical engagement was not achieved therefore, it is recommended that a larger study be undertaken to capture these variables and identify their impact on critical engagement.

With the shift towards hybrid flexible delivery there are a number of emerging themes and under-addressed areas where further research is required Arbaugh (2009). Firstly, the next reasonable step in forwarding research could be to consider the interactions of individual differences such as cognitive ability, intelligence quotient, personality characteristics, psychological capital and role of language on hybrid flexible delivery methods. Secondly, further investigation into the impact of prospectively using Bloom's Taxonomy in unit design may assist in identifying the learning activities that produce critical engagement in hybrid flexible. Thirdly, it would be useful to further investigate the impact of the flipped or reverse classroom on the level of critical engagement in hybrid flexible delivery (Hart, 2002).

Although this research points to older students being more critically engaged than younger students in hybrid flexible delivery, further research needs to be undertaken using a larger sample to understand the impact of age on the level of critical engagement in hybrid flexible delivery. Further studies may also reveal more about the relationship between gender, previous education and work experience on critical engagement in hybrid flexible delivery. This may help teachers respond to students' needs in a better-informed way (Holley & Oliver, 2010).

It is recognised that a more extensive comparison of traditional face-to-face, flexible and hybrid flexible delivery methods is required to identify the impact that each method has on the level of critical engagement. This will lead to developing a better understanding of what conditions are required for each delivery and assessment method to be effective.

Tertiary educators need also to consider social and psychological aspects of the hybrid flexible delivery that may impact on critical engagement such as how to generate improved student-teacher and student-student relationships and manage diverse learning communities (Sweeney & Ingram, 2001 cited in Ladyshevsky, 2004; Arbaugh, 2007).

It is also important to gain further insights into the critical interaction between the learning method, learning styles, the learning environment and how students apply information to new situations (Anderson cited in Sims & Sims, 1995; Entwistle & Peterson, 2004; Zapalska & Broznik, 2007). Incorporating other factors known to predict academic success and critical engagement into future research, for example emotional intelligence (Austin, Evans, Goldwater & Potter, 2005), student motivation (Pintrich, 2003) and student learning approaches and strategies (Entwistle & Ramsden, 1983) would be beneficial.

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Appendices

Appendices

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Appendix 22: An Independent Samples T-Test Time 2 (pre-unit) was conducted by year of enrolment to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed.

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Appendix 24: Distribution of responses to statements A.1 to C.2 on the 6-point scale by time and grade.

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Appendix 27: Component Matrix.

Appendix 28: BMA799 Strategic Management Unit Outline.

Appendix 1: Pre and Post-Unit Questionnaire



2010 SURVEY OF MBA STUDENTS: BMA799 STRATEGIC MANAGEMENT

Instructions

The purpose of this questionnaire is to gather information from you about your opinion of the level of critical engagement you expect to experience in the delivery of the unit BMA799 Strategic Management.

The information that you provide in this questionnaire will not be made available or reported to your organisation, or any other organisation or person, in any form that could identify you as a participant. **Please do not write your name on the form.** Once you have completed the form please seal it in the envelope provided and return as indicated. Return of the form signifies your consent to participate in the study.

If you agree to complete this questionnaire, then you will be asked to complete similar surveys at the mid-point of the unit and upon its completion. By completing the questionnaire on three (3) separate occasions we will be able to gauge how your perceptions of the unit have changed as a result of your experience.

Background information

(Please circle the appropriate response)

Age: 20-29 30-39 40-49 50 plus

Gender: Female / Male

What year of your MBA are you enrolled in? First year Second year

Data code*:

** Please write the first three letters of your mother's maiden name and the last three numbers of your contact telephone number. This code is to make it possible to connect data sets gathered over the three survey times. This code is confidential and known only to you.*

A. Learning outcomes: Use the following scale to indicate your current level of agreement or disagreement with each statement.

<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Somewhat Disagree</i>	<i>Somewhat Agree</i>	<i>Agree</i>	<i>Strongly Agree</i>
1	2	3	4	5	6

<i>I am confident that by the end of the unit I will be able to....</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations.						
2. Draw conclusions from strategy data.						
3. Apply this knowledge to case studies to reach reasoned conclusions about strategy.						
4. Explain strategy in terms of the complexity and uncertainty facing business organisations.						
5. Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.						
6. Generate appropriate responses to key issues in strategic management.						
7. Explain central theory in strategic management.						
8. Apply strategic management principles to present or future work experiences.						
9. Integrate conceptual approaches to strategic management and write about real world experiences.						
10. Demonstrate good written communication in English.						
11. Present well-reasoned written arguments.						

B. Methods: use the following scale to indicate your current level of agreement or disagreement that each item listed below will contribute to your learning.

<i>Item</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. Lectures						
2. Tutorials						
3. Case study workshops						
4. CD learning resources						
5. Prescribed textbook						
6. Extra readings and handouts						
7. In-class multiple choice test						
8. Case study essay assignment						
9. Lecturer's teaching style						

C. Using the same scale, now indicate your overall level of agreement or disagreement with each statement below.

<i>The unit methods will assist me to develop ...</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
1. High level academic, critical and reasoning skills						
2. Useful and relevant practical work-related skills						

D. What three things do you expect to enjoy most about the unit? *(please write on the back page if not enough space)*

E. What three things do you expect to enjoy least about the unit? *(please write on the back page if not enough space)*

You have finished the survey. Please write your data code on the front page of this form.

Do not write your name on this form.

Please seal the completed form in the envelope provided.

THANK YOU



2010 SURVEY OF MBA STUDENTS: BMA799 STRATEGIC MANAGEMENT

Instructions

The purpose of this second questionnaire is to gather information from you about your opinion of the level of critical engagement you experienced in the delivery of the unit BMA799 Strategic Management. If you have not completed the two previous questionnaires, please do not complete this questionnaire.

The information that you provide will not be made available or reported to your organisation, or any other organisation or person, in any form that could identify you as a participant. **Please do not write your name on the form.** Once you have completed the form please seal it in the envelope provided. Return of the form signifies your consent to participate in the study.

This questionnaire marks the end of your participation in the project. **Thank you** for assisting with this research.

Background information

(Please circle the appropriate response)

Age: 20-29 30-39 40-49 50 plus

Gender: Female / Male

What year of your MBA are you enrolled in? First year Second year

Mark gained for case study assignment <50% 50-59% 60-69% 70-79% 80-100%

Which category of qualification/s have you achieved todate? Please circle:

Certificate IV	Diploma	Advanced	Associate	Bachelor	Graduate	Graduate
	Diploma	Degree	Degree	Certificate	Certificate	

Is English your first language? Yes No

Data code*:

* This code should be the same code as you wrote on your two previous survey forms i.e. the **first three letters of your mother's maiden name** and the **last three numbers of your telephone number**. This code is required to connect data sets gathered over the three survey times. This code is confidential and known only to you.

B. Learning outcomes: use the following scale to indicate your current level of agreement or disagreement with each statement.

<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Somewhat Disagree</i>	<i>Somewhat Agree</i>	<i>Agree</i>	<i>Strongly Agree</i>
1	2	3	4	5	6

<i>As a result of completing the unit, I am confident I can now ...</i>	1	2	3	4	5	6
12. Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations.						
13. Draw conclusions from strategy data.						
14. Apply this knowledge to case studies to reach reasoned conclusions about strategy.						
15. Explain strategy in terms of the complexity and uncertainty facing business organisations.						
16. Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.						
17. Generate appropriate responses to key issues in strategic management.						
18. Explain central theory in strategic management.						
19. Apply strategic management principles to present or future work experiences.						
20. Integrate conceptual approaches to strategic management and write about real world experiences.						
21. Demonstrate good written communication in English.						
22. Present well-reasoned written arguments.						

F. Methods: use the following scale to indicate your current level of agreement or disagreement that each item listed below contributed to your learning.

<i>Item</i>	1	2	3	4	5	6
10. Lectures						
11. Tutorials						
12. Case study workshops						
13. CD learning resources						
14. Prescribed Text						
15. Extra readings and handouts						
16. In-class multiple choice test						
17. Case study essay assignment						
18. Lecturer's Teaching Style						

G. Using the same scale, now indicate your overall level of agreement or disagreement with each statement below.

<i>The unit methods assisted me to develop my ...</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>
3. High level academic, critical and reasoning skills						
4. Useful and relevant practical work-related skills						

H. What three things did you enjoy the most about the unit's delivery? (*please write on the back page if not enough space*)

I. What three things did you enjoy the least about the unit's delivery? (*please write on the back page if not enough space*)

J. What three things do you think could be improved about the unit's delivery? (*please write on the back page if not enough space*)

You have finished the survey. Please write your data code on the front page of this form.

Do not write your name on this form.

Please seal the completed form in the envelope provided.

Appendix 2: Focus Group Transcript and Research Memos

Researcher (R): **How do you think you have gone in achieving the Learning Outcomes in BMA799?**

Student 1:

Pretty good I think. Yeah well was a little apprehensive at the beginning of the unit.

Students 2 and 3:

Yes, me too (nodding in agreement)

R: Can you elaborate on why you were apprehensive?

Student 1:

There seemed a really large amount of material – unknown material and I was concerned about the whole assessment process.

R: Does that comment reflect how others felt before the unit?

Student 3 and 4:

(Generally nodding). Yes I was wondering how I would cover all the reading; where the CD fitted in and the assessment seemed a bit daunting.

Student 6:

Yes, there seemed a huge amount of work for just one unit.

R: Any other comments about your feelings before the unit?

Student 8:

I have worked a lot in Saudi Arabia and I wanted to know if this unit was going to help me get the work I want when I get home.

R: So can we go back to my initial question, how do you think you have gone in achieving the Learning Outcomes in BMA799?

Student 2: Well, the structure was good and what we needed to do was really clearly defined by the Lecturer.

Student 4: I liked the way we took small, progressive steps which provided good guidance on how we were going.

Student 7: Yeah, there was lots of continuous reinforcement by the Lecturer.

Student 9: It was in components.

R: Could you explain what you mean by components?

Student 9: The unit was broken down into parts which were linked together. That was good.

R: Could I get some comments on this question from other students who have a non-English speaking background?

Student 10: I think I went well with the Unit because the teaching style was good and the unit well arranged and understandable. But the assignment structure was complicated to follow.

R: Can you explain further how it was complicated to follow?

Student 9: Too many parts and the tutor was not good at explaining things. But because the lecturer used real world examples it helped us make sense of what we needed to know.

Student 8: Yes and we got examples on how to do a case study analysis. That was good.

R: **Which parts of the T & A strategies you found the best?**

Student 1: The structured models provided assisted in my assignment preparation.

(Nodding by students 2, 3, 7, and 9)

Student 1: Although the extra tutorials were not clearly communicated – I mean we didn't really know they were available

Student 2: Yes, I think the tutorials weren't good and some students didn't get much out of them and I know some of my friends would have gone to the extra tutorials but they didn't think the tutor was any good.

R: What motivated you to learn?

Students 2 and 3 (both talking and agreeing with each other). The real life examples that are linked to global business, the economy and future work scenarios and how your skills can be applied. That was all really good.

Student 10: The case analysis helped me to understand how to link together the theory and practice. Really important for me and to get better jobs.

Student 6: The passion of the lecturer made me want to learn.

R: Another other comments?

(Students generally shaking heads).

R: Do you have any other comments regarding the T & A strategies? How did they engage you?

Student: I have worked in an international company before, and getting an understanding of the case helped me relate to my job and my future when I am organising my department.

Student 4: The models used by the lecturer were very useful for first semester students.... You know, the essay format.

(Nodding from students in consensus with previous opinion).

Student 2: The tutorials were vague in that if the class had not read the required material the tutor would not discuss this point... the subject. The students who had read the required piece (meaning article) were penalised if the majority of the class hadn't read the article. He would not discuss the point.

(All students nodding in agreement to this comment)

Student 3: I did think a lot about the relevance of what I was learning... well how I could use it after I finished the unit.

Student 6: Yes it got me to think a lot and I think the approaches to teaching the unit did help me think about what I was learning and why it is important I guess.

Student 10: It was useful to apply to the business environment particularly for when I go home.

R: What particularly made the unit engaging for you? What does critical engagement mean to you? Did you feel you were critically engaged?

Student 1: The interactive approach motivated me to learn and get a better understanding. The case study workshops and being able to look at the CD to find out and get a bit prepared for what we were doing next. Yes that was good.

Student 2: It was all pretty relevant information. I could relate to it and it was easy to understand.

Student 9: I think the theory was reinforced through case studies and practice

Student 7: Yes reading for my knowledge about strategy and might be important in my business after... I mean like (student with non-English speaking background).

Student 4: Studying for our knowledge.

Student 7: The lectures were pretty engaging. The book too was good – gives good knowledge succinctly.

R: How much did you use the CD and other learning strategies?

Student 1: Didn't use CD it at all.

Student 2: I used PowerPoint, the MyLO and case studies to prepare for the lecture.

Student 3: The CD was useful for the mini-lectures also good for reinforcement by use of examples (student with non-English speaking background).

Student 5: CD had relevant sections to provide information about the next lecture so I knew what to expect.

Student 7: Think it could have been used better.

R: Can you explain what you mean by 'better'?

Student 7: I would like to hear about other students work experiences and how they have used what they have learnt. Not sure if it's the CD or I know in some subjects they have discussions.

R: What do you mean by discussion? Are you talking about blogs?

Student 7: Yes, not just about the cases but what other people are having trouble understanding and how we can help each other with assessment and things.

(Some nodding by most of the focus group).

Appendix 3: Summary of Qualitative Data collected from the Questionnaire

Pre-Unit Questionnaire

1. What three things do you expect to enjoy most about this Unit's delivery?

Case study; group discussion and assignments

Planning strategically; gaining understanding and thinking outside the square

Practical focus

Application of knowledge being linked to the real workplace

High level reasoning and useful work-related skills

Discussing case studies

Combining theory with practice

Interesting lecture

Tutorial classes

2. What three things do you expect to enjoy least about this Unit's delivery?

Assessment requirements – remembering formulas

Sitting through lectures

Tutorials and lectures being boring

Just teaching concepts and theories in textbook and if there is not case and example

Chinese style face to face examination

Assignments not being relevant

Lots of assignments in a short period

Groupwork.

No comment.

Post-Unit Questionnaire

1. What three things did you enjoy most about this Unit's delivery?

Tutorials

Case Analysis

Presentation of knowledge of the main theoretical concepts and frameworks relating to the unit's key themes

Instructor's teaching style

Use of real-life examples

Interesting class

Lecturer's knowledge

Structure of the case study

Fun and easy to understand

Well organised

The way concepts were explained by the lecturer

Applying theories to real business life

Theory in action

Opportunity to learn by trial and error

Encouraged to think and reason through use of examples

Textbook presentation

2. What three things did you enjoy least about this Unit's delivery?

The tutor was pompous and ineffective

Lack of structure in tutorials

Textbook

Multiple-choice test

The different mark scale between tutorial groups

Too little time to prepare for exam after assignment

Poorly organised tutorials

High workload

Some chapter very complicated

Large amount of essay assignments.

3. What three things do you think could be improved about this Unit's delivery?

Ensure all materials are available on MyLO

Improve tutorial structure and replace tutor

Obtain more strategies that I can apply to my career

Introduction of student debates/discussion to stimulate learning

Improve PowerPoint templates

A bit better spacing of work/assignments.

Appendix 4: Participant Information Sheet

PARTICIPANT PROJECT INFORMATION SHEET

Title: Identifying the perceived relationship between the hybrid flexible delivery method and the level of critical engagement.

Chief Investigator: Dr Dallas Hanson

Invitation

We would like to invite you to read the following information before deciding if you wish to participate in a project which has the potential to provide important benefits to students enrolled in units involving flexible or hybrid methods of delivery. This study is being conducted by Ms Christine Adams in partial fulfilment of the requirements of a Masters degree. Christine is being supervised by Dr Dallas Hanson and Dr Wayne O'Donohue from the School of Management, Faculty of Business, University of Tasmania.

'What is the aim of this study?'

The research study aims to identify the perceived relationship between the hybrid flexible delivery method employed in BMA 799 Strategic Management and the level of critical engagement experienced by students enrolled in this Unit. For the purpose of this research, critical engagement in the Unit is defined as the extent to which students achieve the specified learning outcomes.

‘Why have I been invited to participate in this study?’

You are eligible to participate in this study as you are enrolled in BMA 799 Strategic Management which is being offered in a hybrid delivery form combining face-to-face and flexible teaching methods.

4. ‘What does this study involve?’

If you agree to become involved in this study, you will simply be asked to complete three (3) separate surveys; the first of which will be administered in Week 1 at the commencement of the Unit, the second during Week 8 and third in Week 13 at the conclusion of the Unit.

Any information that can specifically identify you, or indicate your participation in the study, will NOT be reported to your organization or the lecturer-in-charge of the Unit. Your completion and submission of the attached questionnaire signifies your consent to participate in this project.

None of the questions contain any sensitive issues. They ask you for information about your expectations with regard to achievement of the Unit’s learning outcomes, and in regard to your engagement with the teaching methods, and assessment procedures. Each questionnaire will take approximately 20 minutes to complete.

It is important that you understand that your involvement in this study is voluntary. While we would be pleased to have you participate, we respect your right to decline. There will be no consequences to you if you decide not to participate, and this will not affect enrolment in the Unit in any way. If you decide to discontinue participation at any time, you may do so without providing an explanation. All the data will be kept in a locked filing cabinet or password protected computer in the

School of Management and will be securely destroyed five years after publication of the data.

‘Are there any possible risks from participation in this study?’

There are no specific risks anticipated with participation in this study. As the surveys will be directly distributed and collected personally by the Chief Investigator, no other parties will have access to your personal details which will be treated as confidential and private under procedures approved by the Tasmanian Social Science Human Research Ethics Committee (see below).

‘What if I have questions about this research?’

If you would like to discuss any aspect of this study please feel free to contact Ms Christine Adams (telephone: 6226 2953 or email cadams0@utas.edu.au).

This study [*HREC project number H11298*] has been approved by the Tasmanian Social Science Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study should contact the Executive Officer of the HREC (Tasmania) Network on (03) 6226 7479 or email human.ethics@utas.edu.au. *Thank you for taking the time to consider this study.*

Thank you for taking the time to consider this study.



STATEMENT OF INFORMED CONSENT

Project Title: Identifying the perceived relationship between hybrid flexible delivery method and the level of critical engagement.

1. I have read and understood the "Participant Information Sheet" for this study.
2. The nature of the study has been explained to me.
3. I understand that the study involves two (2) written questionnaires of approximately 30 minutes duration each and up to three (3) audio-recorded interviews each approximately 30 minutes duration. A type-written copy of the interview transcript will be supplied to me at my request.
4. I understand that all research data will be securely stored for a period of 5 years. The data will be securely destroyed at the end of 5 years.
5. Any questions that I have asked have been answered to my satisfaction.
6. I agree that research data gathered for the study may be published, provided that I cannot be identified as a participant.
7. I agree to participate in this research study and understand that I can withdraw at any time and if I choose to end my participation I may withdraw any information I have supplied to the date.

Name of participant:

Signature of participant Date

I have explained this project and the implications of participation in it to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation.

Name of interviewer:

Signature of interviewer Date

Appendix 5: Correlation between teaching and assessment and learning outcomes and the corresponding cognitive processes of Bloom's Taxonomy

Lectures		
Tutorials		
Case Study Workshops		
CD Learning Resources		
Additional Readings and handouts		
In-class multiple choice test		
Case study essay assignment		
Prescribed Textbook		
Lecturer's Teaching Style		
Learning outcome 1	Demonstrate knowledge and understanding of the main theories, concepts and frameworks relating to strategy in organisations.	Remember + Understand + Apply
Learning outcome 2	Draw conclusions from strategy data.	Evaluate + Create
Learning outcome 3	Apply this knowledge to case studies in terms of the complexity and uncertainty facing business organisations.	Apply + Analyse
Learning outcome 4	Conceptualise and articulate the usefulness and relevance of existing theories, concepts and frameworks in dealing with issues in strategic management.	Remember + Understand + Apply + Evaluate
Learning outcome 5	Critically evaluate the usefulness and relevance of existing theories and frameworks in dealing with issues in strategic management.	Remember + Understand + Apply + Evaluate

Appendix 6: Independent Samples T-Test (pre-unit) was conducted by recoded age to compare the confidence in achieving the learning outcomes by the end of the unit.

Learning Outcome 1 (A1): there was no significant difference in scores for Group 1 ($M = 5.03$, $SD = .637$) and Group 2 ($M = 5.38$, $SD = .744$); $t(41) = -1.331$, $p = .191$ (two-tailed).

Learning Outcome 2 (A2): there was no significant difference in scores for Group 1 ($M = 5.00$, $SD = .707$) and Group 2 ($M = 5.25$, $SD = .707$); $t(41) = -.897$, $p = .375$ (two-tailed).

Learning Outcome 3 (A3): there was no significant difference in scores for Group 1 ($M = 4.85$, $SD = .755$) and Group 2 ($M = 4.88$, $SD = .641$); $t(41) = -.091$, $p = .928$ (two-tailed).

Learning Outcome 4 (A4): there was no significant difference in scores for Group 1 ($M = 4.61$, $SD = .747$) and Group 2 ($M = 4.63$, $SD = .744$); $t(41) = -.866$, $p = .949$ (two-tailed).

Learning Outcome 5 (A5): there was no significant difference in scores for Group 1 ($M = 4.73$, $SD = .719$) and Group 2 ($M = 5.29$, $SD = .488$); $t(41) = .252$, $p = .058$ (two-tailed).

Learning Outcome 6 (A6): there was no significant difference in scores for Group 1 ($M = 4.88$, $SD = .696$) and Group 2 ($M = 5.13$, $SD = .641$); $t(41) = -.585$, $p = .369$ (two-tailed).

Learning Outcome 7 (A7): there was no significant difference in scores for Group 1 ($M = 4.76$, $SD = .633$) and Group 2 ($M = 5.00$, $SD = .756$); $t(41) = .744$, $p = .372$ (two-tailed).

Learning Outcome 8 (A8): there was no significant difference in scores for females ($M = 4.85$, $SD = .906$) and males ($M = 5.13$, $SD = .835$); $t(41) = .678$, $p = .437$ (two-tailed).

Learning Outcome 9 (A9): there was no significant difference in scores for females ($M = 4.56$, $SD = .821$) and males ($M = 4.63$, $SD = .957$); $t(41) = -.232$, $p = .818$ (two-tailed).

Learning Outcome 10 (A10): there was no significant difference in scores for Group 1 ($M = 4.52$, $SD = .870$) and Group 2 ($M = 5.25$, $SD = .707$); $t(41) = -.426$, $p = .033$ two-tailed.

Learning Outcome 11 (A11): there was no significant difference in scores for Group 1 ($M = 4.70$, $SD = .918$) and Group 2 ($M = 5.00$, $SD = 1.095$); $t(41) = .162$, $p = .393$ two-tailed.

Appendix 7: Independent Samples T-Test (post-unit) was conducted by recoded age to compare the confidence in achieving the learning outcomes by the end of the unit.

Learning Outcome1 (A1): there was no significant difference in scores for Group 1 ($M = 4.81$, $SD = .703$) and Group 2 ($M = 5.20$, $SD = .789$); $t(41) = -.507$, $p = .143$ (two-tailed).

Learning Outcome 2 (A2): there was no significant difference in scores for Group 1 ($M = 4.87$, $SD = .670$) and Group 2 ($M = 5.20$, $SD = .632$); $t(41) = .867$, $p = .179$ (two-tailed).

Learning Outcome 3 (A3): there was no significant difference in scores for Group 1 ($M = 4.94$, $SD = .680$) and Group 2 ($M = 5.10$, $SD = .738$); $t(41) = -.740$, $p = .518$ (two-tailed).

Learning Outcome 4 (A4): there was no significant difference in scores for Group 1 ($M = 4.97$, $SD = .752$) and Group 1 ($M = 4.70$, $SD = .1059$); $t(41) = .063$, $p = .382$ (two-tailed).

Learning Outcome 5 (A5): there no significant difference in scores for Group 1 ($M = 4.94$, $SD = .814$) and Group 2 ($M = 4.90$, $SD = .994$); $t(41) = .513$, $p = .910$ (two-tailed).

Learning Outcome 6 (A6): there was no significant difference in scores for Group 1 ($M = 4.90$, $SD = .746$) and Group 2 ($M = 5.10$, $SD = .876$); $t(41) = .963$, $p = .491$ (two-tailed).

Learning Outcome 7 (A7): there was no significant difference in scores for Group 1 ($M = 4.71$, $SD = .824$) and Group 2 ($M = 5.00$, $SD = .667$); $t(41) = 1.09$, $p = .319$ (two-tailed).

Learning Outcome 8 (A8): there was no significant difference in scores for females ($M = 4.77$, $SD = .717$) and males ($M = 5.20$, $SD = .919$); $t(41) = .667$, $p = .136$ (two-tailed).

Learning Outcome 9 (A9): there no significant difference in scores for females ($M = 4.94$, $SD = .680$) and males ($M = 5.10$, $SD = .738$); $t(41) = -.740$, $p = .518$ (two-tailed).

Learning Outcome 10 (A10): there was no significant difference in scores for Group 1 ($M = 4.61$, $SD = .715$) and Group 2 ($M = 4.70$, $SD = .675$); $t(41) = -.640$, $p = .736$ two tailed.

Learning Outcome 11(A11): there was no significant difference in scores for Group 2 ($M = 4.81$, $SD = .749$) and Group 2 ($M = 4.90$, $SD = .568$); $t(41) = .080$, $p = .720$ two tailed.

Appendix 8: Independent Samples T-Test (pre-unit) was conducted by recoded age to compare the level of agreement or disagreement regarding the influence of each of the teaching and assessment strategies on learning.

Lectures (B1) there was no significant difference in scores for Group 1 ($M = 5.15$, $SD = .795$) and Group 2 ($M = 5.50$, $SD = .756$); $t(41) = -.786$, $p = .269$ (two-tailed).

Tutorials (B2) there was no significant difference in scores for Group 1 ($M = 5.42$, $SD = .708$) and Group 2 ($M = 5.38$, $SD = 1.061$); $t(41) = .329$, $p = .874$ (two-tailed).

Case Study workshops (B3) there was no significant difference in scores for Group 1 ($M = 5.24$, $SD = .867$) and Group 2 ($M = 5.38$, $SD = 1.061$); $t(41) = -.666$, $p = .712$ (two-tailed).

CD Learning Resources (B4) there was no significant difference in scores for Group 1 ($M = 4.21$, $SD = .960$) and Group 2 ($M = 4.50$, $SD = 1.309$); $t(41) = .332$, $p = .483$ (two-tailed).

Prescribed Text (B5) there was no significant difference in scores for Group 1 ($M = 4.45$, $SD = 1.092$) and Group 2 ($M = 5.38$, $SD = .744$); $t(41) = -.320$, $p = .030$ (two-tailed).

Extra readings and handouts (B6) there was **a significant difference** in scores for Group 1 ($M = 4.42$, $SD = .792$) and Group 2 ($M = 4.57$, $SD = 1.397$); $t(41) = .003$, $p = .795$ (two-tailed).

In-class multiple choice test (B7) there was no significant difference in scores for Group 1 ($M = 4.30$, $SD = 1.015$) and Group 2 ($M = 4.25$, $SD = 1.282$); $t(41) = .235$, $p = .900$ (two-tailed).

Case study assignment (B8) there was no significant difference in scores for Group 1 ($M = 4.73$, $SD = 1.069$) and Group 2 ($M = 5.25$, $SD = .707$); $t(41) = -.516$, $p = .198$ (two-tailed).

Lecturer's teaching style (B9) there was no significant differences in scores for Group 1 ($M = 5.30$, $SD = .728$) and Group 2 ($M = 5.50$, $SD = 1.069$); $t(41) = .497$, $p = .536$ (two-tailed).

Appendix 9: Independent Samples T-Test (post-unit) was conducted by recoded age to compare the level of agreement or disagreement regarding the influence of each of the teaching and assessment strategies on learning.

Lectures (B1) there was no significant difference in scores for Group 1 ($M = 5.13$, $SD = .670$) and Group 2 ($M = 5.20$, $SD = .789$); $t(41) = -.391$, $p = .782$ (two-tailed).

Tutorials (B2) there was no significant difference in scores for Group 1 ($M = 4.19$, $SD = 1.493$) and Group 2 ($M = 4.50$, $SD = 1.269$); $t(41) = .630$, $p = .563$ (two-tailed).

Case Study workshops (B3) there was no significant difference in scores for Group 1 ($M = 4.90$, $SD = .700$) and Group 2 ($M = 5.10$, $SD = .876$); $t(41) = -.239$, $p = .472$ (two-tailed).

CD Learning Resources (B4) there was no significant difference in scores for Group 1 ($M = 4.35$, $SD = .915$) and Group 2 ($M = 4.30$, $SD = 1.252$); $t(41) = .266$, $p = .881$ (two-tailed).

Prescribed Text (B5) there was no significant difference in scores for Group 1 ($M = 4.87$, $SD = .806$) and Group 2 ($M = 4.90$, $SD = .568$); $t(41) = .134$, $p = .917$ (two-tailed).

Extra readings and handouts (B6) there was **a significant difference** in scores for Group 1 ($M = 4.74$, $SD = .815$) and Group 2 ($M = 4.50$, $SD = .850$); $t(41) = .791$, $p = .424$ (two-tailed).

In-class multiple choice test (B7) there was no significant difference in scores for Group 1 ($M = 4.45$, $SD = .961$) and Group 2 ($M = 4.40$, $SD = .966$); $t(41) = .744$, $p = .883$ (two-tailed).

Case study assignment (B8) there was no significant difference in scores for Group 1 ($M = 5.03$, $SD = .875$) and Group 2 ($M = 5.10$, $SD = .876$); $t(41) = -.928$, $p = .833$ (two-tailed).

Lecturer's teaching style (B9) there was no significant differences in scores for Group 1 ($M = 5.13$, $SD = .763$) and Group 2 ($M = 5.30$, $SD = .675$); $t(41) = .700$, $p = .531$ (two-tailed).

Appendix 10: An Independent-Samples T-Test (pre-unit) was conducted by recoded age to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed as a result of undertaking the unit.

Development of high level academic, critical and reasoning skills (C1): there was a significant difference in scores for Group 1 ($M = 4.73$, $SD = .977$) and Group 2 ($M = 5.50$, $SD = .756$); $t(41) = .907$, $p = .044$ (two-tailed).

Development of useful and relevant practical work-related skills (C2): there was no significant difference in scores for Group 1 ($M = 5.15$, $SD = .712$) and Group 2 ($M = 5.75$, $SD = .707$); $t(41) = .467$, $p = .039$ (two-tailed).

Appendix 11: An Independent-Samples T-Test (post-unit) was conducted by recoded age to compare the level of agreement or disagreement regarding if academic and work-related skills were developed as a result of undertaking the unit.

Development of high level academic, critical and reasoning skills (C1): there was a significant difference in scores for Group 1 ($M = 4.683$, $SD = .871$) and Group 2 ($M = 5.10$, $SD = .738$); $t(41) = .309$ $p = .176$ (two-tailed).

Development of useful and relevant practical work-related skills (C2): there was no significant difference in scores for Group 1 ($M = 4.77$, $SD = .805$) and Group 2 ($M = 4.90$, $SD = .738$); $t(41) = .449$, $p = .664$ (two-tailed).

Appendix 12: Independent Samples T-Test (pre-unit) was conducted by gender to compare the confidence in achieving the learning outcomes by the end of the unit.

Learning Outcome1 (A1): there was no significant difference in scores for females ($M = 5.04$, $SD = .611$) and males ($M = 5.19$, $SD = .750$); $t(41) = -.690$, $p = .494$ (two-tailed).

Learning Outcome 2 (A2): there was no significant difference in scores for females ($M = 4.96$, $SD = .676$) and males ($M = 5.19$, $SD = .750$); $t(41) = -1.008$, $p = .320$ (two-tailed).

Learning Outcome 3 (A3): there was no significant difference in scores for females ($M = 4.84$, $SD = .688$) and males ($M = 4.88$, $SD = .806$); $t(41) = -.149$, $p = .883$ (two-tailed).

Learning Outcome 4 (A4): there was no significant difference in scores for females ($M = 4.56$, $SD = .651$) and males ($M = 4.69$, $SD = .873$); $t(41) = -.535$, $p = .596$ (two-tailed).

Learning Outcome 5 (A5): there no significant difference in scores for females ($M = 4.88$, $SD = .726$) and males ($M = 4.74$, $SD = 7.04$); $t(41) = .626$, $p = .535$ (two-tailed).

Learning Outcome 6 (A6): there was no significant difference in scores for females ($M = 4.92$, $SD = .702$) and males ($M = 4.94$, $SD = .680$); $t(41) = -.079$, $p = .938$ (two-tailed).

Learning Outcome 7 (A7): there was no significant difference in scores for females ($M = 4.96$, $SD = .611$) and males ($M = 4.56$, $SD = .727$); $t(41) = 1.886$, $p = .067$ (two-tailed).

Learning Outcome 8 (A8): there was no significant difference in scores for females ($M = 4.92$, $SD = .862$) and males ($M = 4.88$, $SD = .957$); $t(41) = .156$, $p = .877$ (two-tailed).

Learning Outcome 9 (A9): there no significant difference in scores for females ($M = 4.56$, $SD = .821$) and males ($M = 4.63$, $SD = .957$); $t(41) = -.232$, $p = .818$ (two-tailed).

Learning Outcome 10 (A10): there was no significant difference in scores for females ($M = 4.56$, $SD = .870$) and males ($M = 4.81$, $SD = .911$); $t(41) = -.890$, $p = .379$ two tailed.

Learning Outcome 11(A11): there was no significant difference in scores for females ($M = 4.60$, $SD = .707$) and males ($M = 5.00$, $SD = 1.095$); $t(41) = -1.425$, $p = .162$ two tailed.

Appendix 13: Independent Samples T-Test (post-unit) was conducted by gender to compare the confidence in achieving the learning outcomes by the end of the unit.

Learning Outcome 1 (A1): there was no significant difference in scores for females ($M = 4.83$, $SD = .778$) and males ($M = 5.00$, $SD = 6.86$); $t(41) = -.748$, $p = .459$ (two-tailed).

Learning Outcome 2 (A2): there was no significant difference in scores for females ($M = 5.04$, $SD = .638$) and males ($M = 4.83$, $SD = .707$); $t(41) = .998$, $p = .324$ (two-tailed).

Learning Outcome 3 (A3): there was no significant difference in scores for females ($M = 4.96$, $SD = .706$) and males ($M = 5.00$, $SD = .686$); $t(41) = -.198$, $p = .844$ (two-tailed).

Learning Outcome 4 (A4): there was no significant difference in scores for females ($M = 4.83$, $SD = .937$) and males ($M = 5.00$, $SD = .686$); $t(41) = -.686$, $p = .497$ (two-tailed).

Learning Outcome 5 (A5): there was no significant difference in scores for females ($M = 4.96$, $SD = .928$) and males ($M = 4.89$, $SD = .758$); $t(41) = .250$, $p = .804$ (two-tailed).

Learning Outcome 6 (A6): there was no significant difference in scores for females ($M = 5.04$, $SD = .767$) and males ($M = 4.83$, $SD = .786$); $t(41) = .861$, $p = .394$ (two-tailed).

Learning Outcome 7 (A7): there was no significant difference in scores for females ($M = 4.96$, $SD = .706$) and males ($M = 4.56$, $SD = .856$); $t(41) = 1.645$, $p = .108$ (two-tailed).

Learning Outcome 8 (A8): there was no significant difference in scores for females ($M = 4.87$, $SD = .757$) and males ($M = 4.89$, $SD = .832$); $t(41) = -.078$, $p = .939$ (two-tailed).

Learning Outcome 9 (A9): there was no significant difference in scores for females ($M = 4.96$, $SD = .706$) and males ($M = 5.00$, $SD = .686$); $t(41) = -.198$, $p = .844$ (two-tailed).

Learning Outcome 10 (A10): there was no significant difference in scores for females ($M = 4.57$, $SD = .728$) and males ($M = 4.72$, $SD = .669$); $t(41) = -.710$, $p = .482$ (two-tailed).

Learning Outcome 11 (A11): there was no significant difference in scores for females ($M = 4.83$, $SD = .650$) and males ($M = 4.83$, $SD = .786$); $t(41) = -.032$, $p = .974$ (two-tailed).

Appendix 14: Independent-Samples T-Test (pre-unit) was conducted by gender to compare the level of agreement or disagreement regarding the influence of each of the teaching and assessment strategies on learning.

Lectures (B1): there was no significant difference in scores for females ($M = 5.24$, $SD = .779$) and males ($M = 5.19$, $SD = .834$); $t(41) = .205$, $p = .839$ (two-tailed).

Tutorials (B2): there was no significant difference in scores for females ($M = 5.32$, $SD = 8.52$) and males ($M = 5.56$, $SD = .629$); $t(41) = -.978$, $p = .334$ (two-tailed).

Case study workshops (B3): there was no significant difference in scores for females ($M = 5.36$, $SD = .810$) and males ($M = 5.13$, $SD = 1.025$); $t(41) = .817$, $p = .419$ (two tailed).

CD Learning Resources (B4): there was no significant difference in scores for females ($M = 4.28$, $SD = .980$) and males ($M = 4.25$, $SD = 1.125$); $t(41) = .090$, $p = .929$ (two tailed).

Prescribed text (B5): there was no significant difference in scores for females ($M = 4.96$, $SD = .841$) and males ($M = 4.13$, $SD = 1.258$); $t(41) = 2.553$, $p = .015$ (two tailed).

Extra readings and handouts (B6): there was no significant difference in scores for females ($M = 4.58$, $SD = .881$) and males ($M = 4.25$, $SD = .931$); $t(41) = 1.147$, $p = .259$ (two tailed).

In-class multiple choice test (B7): there was no significant difference in scores for females ($M = 4.32$, $SD = .945$) and males ($M = 4.25$, $SD = 1.238$); $t(41) = .205$, $p = .839$ (two tailed).

Case study assignment (B8): there was no significant difference in scores for females ($M = 5.08$, $SD = .702$) and males ($M = 4.44$, $SD = 1.315$); $t(41) = 1.791$, $p = .087$ (two-tailed).

Lecturer's teaching style (B9): there was no significant difference in scores for females ($M = 5.32$, $SD = .852$) and males ($M = 5.38$, $SD = .719$); $t(41) = -.214$, $p = .832$ (two tailed).

Appendix 15: Independent-Samples T-Test (post-unit) was conducted by gender to compare the level of agreement or disagreement regarding the influence of each of the teaching and assessment strategies on learning.

Lectures (B1) there was no significant difference in scores for females ($M = 5.04$, $SD = .767$) and males ($M = 5.28$, $SD = .575$); $t(41) = -1.079$, $p = .287$ (two-tailed).

Tutorials (B2) there was no significant difference in scores for females ($M = 4.26$, $SD = 1.453$) and males ($M = 4.28$, $SD = 1.447$); $t(41) = -.037$, $p = .971$ (two-tailed).

Case Study workshops (B3) there was no significant difference in scores for females ($M = 4.91$, $SD = .733$) and males ($M = 5.00$, $SD = .767$); $t(41) = -.369$, $p = .714$ (two-tailed).

CD Learning Resources (B4) there was no significant difference in scores for females ($M = 4.39$, $SD = .891$) and males ($M = 4.28$, $SD = 1.127$); $t(41) = .360$, $p = .721$ (two-tailed).

Prescribed Text (B5) there was no significant difference in scores for females ($M = 4.78$, $SD = .795$) and males ($M = 5.00$, $SD = .686$); $t(41) = -.922$, $p = .362$ (two-tailed).

Extra readings and handouts (B6) there was no significant difference in scores for females ($M = 4.74$, $SD = .810$) and males ($M = 4.61$, $SD = .850$); $t(41) = .492$, $p = .626$ (two-tailed).

In-class multiple choice test (B7) there was no significant difference in scores for females ($M = 4.52$, $SD = .846$) and males ($M = 4.33$, $SD = 1.085$); $t(41) = .625$, $p = .535$.

Case study assignment (B8) there was no significant difference in scores for females ($M = 4.96$, $SD = .976$) and males ($M = 5.17$, $SD = .707$); $t(41) = -.768$, $p = .447$ (two-tailed).

Lecturer's teaching style (B9) there was no significant differences in scores for females ($M = 5.04$, $SD = .767$) and males ($M = 5.33$, $SD = .686$); $t(41) = -1.256$, $p = .216$ (two-tailed).

Appendix 16: Independent-Samples T-Test (pre-unit) was conducted by gender to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed.

Development of high level academic, critical and reasoning skills (C1): there was a significant difference in scores for females ($M = 5.08$, $SD = .640$) and males ($M = 4.56$, $SD = 1.315$); $t(41) = 1.688$, $p = .099$ (two-tailed).

Development of useful and relevant practical work-related skills (C2): there was no significant difference in scores for females ($M = 5.32$, $SD = .690$) and males ($M = 5.19$, $SD = .834$); $t(41) = .553$, $p = .584$ (two-tailed).

Appendix 17: An Independent-Samples T-Test Time 2 (post-unit) was conducted by gender to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed.

Development of high level academic, critical and reasoning skills (C1): there was no significant difference in scores for females ($M = 4.74$, $SD = .964$) and males ($M = 4.83$, $SD = .707$); $t(41) = -.348$, $p = .730$ (two-tailed).

Development of useful and relevant practical work-related skills (C2): there was no significant difference in scores for females ($M = 4.74$, $SD = .810$) and males ($M = 4.89$, $SD = .758$); $t(41) = -.604$, $p = .549$ (two-tailed).

Appendix 18: Independent Samples T-Test (pre-unit) was conducted by year of enrolment to compare the confidence in achieving the learning outcomes by the end of the unit.

Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations (A1): there was no significant difference in scores for first year ($M = 5.04$, $SD = .599$) and second year ($M = 5.20$, $SD = .775$); $t(41) = -.747$, $p = .460$ (two-tailed).

Draw conclusions from strategy data (A2): there was no significant difference in scores for first year ($M = 5.08$, $SD = .688$) and second year ($M = 5.00$, $SD = .756$); $t(41) = .333$, $p = .741$ (two-tailed).

Apply this knowledge to case studies to reach reasoned conclusions about strategy (A3): there was no significant difference in scores for first year ($M = 4.92$, $SD = .688$) and second year ($M = 4.73$, $SD = .799$); $t(41) = .802$, $p = .428$ (two-tailed).

Explain strategy in terms of the complexity and uncertainty facing business organisations (A4): there was no significant difference in scores for first year ($M = 4.54$, $SD = .706$) and second year ($M = 4.73$, $SD = .799$); $t(41) = -.811$, $p = .422$ (two-tailed).

Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management (A5): there was no significant difference in scores for first year ($M = 4.68$, $SD = .690$) and second year ($M = 5.07$, $SD = .704$); $t(41) = -1.703$, $p = .097$ (two-tailed).

Generate appropriate responses to key issues in strategic management (A6): there was no significant difference in scores for first year ($M = 4.96$, $SD = .599$) and second year ($M = 4.87$, $SD = .834$); $t(41) = .387$, $p = .702$ (two-tailed).

Explain central theory in strategic management (A7): there was no significant difference in scores for first year ($M = 4.69$, $SD = .618$) and second year ($M = 5.00$, $SD = .756$); $t(41) = -.1415$, $p = .165$ (two-tailed).

Apply strategic management principles to present or future work experiences (A8): there was no significant difference in scores for first year ($M = 4.92$, $SD = .891$) and second year ($M = 4.87$, $SD = .915$); $t(41) = .193$, $p = .848$ (two-tailed).

Integrate conceptual approaches to strategic management and write real world experiences (A9): there was no significant difference in scores for first year ($M = 4.62$, $SD = .941$) and second year ($M = 4.53$, $SD = .743$); $t(41) = .289$, $p = .774$ (two-tailed).

Demonstrate good written communication in English (A10): there was no significant difference in scores for first year ($M = 4.58$, $SD = .945$) and second year ($M = 4.80$, $SD = .775$); $t(41) = -.775$, $p = .443$ (two-tailed).

Present well-reasoned written arguments (A11): there was no significant difference in scores for first year ($M = 4.69$, $SD = .970$) and second year ($M = 4.87$, $SD = .743$); $t(41) = -.601$, $p = .552$ (two-tailed).

Appendix 19: Independent Samples T-Test (post-unit) was conducted by year of enrolment to compare the confidence in achieving the learning outcomes by the end of the unit.

Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations (A1): there was no significant difference in scores for first year ($M = 4.92$, $SD = .796$) and second year ($M = 4.87$, $SD = .640$); $t(41) = -.234$, $p = .816$ (two-tailed).

Draw conclusions from strategy data (A2): there was no significant difference in scores for first year ($M = 4.88$, $SD = .711$) and second year ($M = 5.07$, $SD = .594$); $t(41) = -.836$, $p = .408$ (two-tailed).

Apply this knowledge to case studies to reach reasoned conclusions about strategy (A3): there was no significant difference in scores for first year ($M = 4.88$, $SD = .711$) and second year ($M = 5.13$, $SD = .640$); $t(41) = -1.117$, $p = .271$ (two tailed).

Explain strategy in terms of the complexity and uncertainty facing business organisations (A4): there was no significant difference in scores for first year ($M = 4.85$, $SD = .784$) and second year ($M = 5.00$, $SD = .926$); $t(41) = -.566$, $p = .574$ (two tailed).

Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management (A5): there was no significant difference in scores for first year ($M = 4.81$, $SD = .801$) and second year ($M = 5.13$, $SD = .915$); $t(41) = -1.190$, $p = .241$ (two tailed).

Generate appropriate responses to key issues in strategic management (A6): there was no significant difference in scores for first year ($M = 4.96$, $SD = .774$) and second year ($M = 4.93$, $SD = .799$); $t(41) = .111$, $p = .912$ (two tailed).

Explain central theory in strategic management (A7): there was no significant difference in scores for first year ($M = 4.73$, $SD = .778$) and second year ($M = 4.87$, $SD = .834$); $t(41) = -.525$, $p = .602$ (two tailed).

Apply strategic management principles to present or future work experiences (A8): there was no significant difference in scores for first year ($M = 4.88$, $SD = .766$) and second year ($M = 4.87$, $SD = .834$); $t(41) = .070$, $p = .945$ (two-tailed).

Integrate conceptual approaches to strategic management and write real world experiences (A9): there was no significant difference in scores for first year ($M = 4.75$, $SD = .675$) and second year ($M = 5.20$, $SD = .676$); $t(41) = -1.616$, $p = .114$ (two tailed).

Demonstrate good written communication in English (A10): there was no significant difference in scores for first year ($M = 4.58$, $SD = .643$) and second year ($M = 4.73$, $SD = .799$); $t(41) = -.686$, $p = .497$ (two-tailed).

Present well-reasoned written arguments (A11): there was a significant difference in scores for first year ($M = 4.69$, $SD = .736$) and second year ($M = 5.07$, $SD = .594$); $t(41) = -1.778$, $p = .084$ (two-tailed)

Appendix 20: Independent Samples T-Test (pre-unit) was conducted by year of enrolment to compare the level of agreement or disagreement regarding the influence of each of the teaching and assessment methods on learning.

Lectures (B1) there was no significant difference in scores for first year ($M = 5.19$, $SD = .801$) and second year ($M = 5.27$, $SD = .799$); $t(41) = -.287$, $p = .776$ (two-tailed).

Tutorials (B2) there was no significant difference in scores for first year ($M = 5.38$, $SD = .852$) and second year ($M = 5.47$, $SD = .640$); $t(41) = -.323$, $p = .748$ (two-tailed).

Case Study workshops (B3) there was no significant difference in scores for first year ($M = 5.19$, $SD = 1.021$) and second year ($M = 5.40$, $SD = .632$); $t(41) = -.711$, $p = .481$ (two-tailed).

CD Learning Resources (B4) there was no significant difference in scores for first year ($M = 4.23$, $SD = 1.177$) and second year ($M = 4.33$, $SD = .724$); $t(41) = .345$, $p = .732$ (two-tailed).

Prescribed Text (B5) there was no significant difference in scores for first year ($M = 4.46$, $SD = 1.208$) and second year ($M = 4.93$, $SD = .799$); $t(41) = -.1349$, $p = .185$ (two-tailed).

Extra readings and handouts (B6) there was no significant difference in scores for first year ($M = 4.58$, $SD = .857$) and second year ($M = 4.21$, $SD = .975$); $t(41) = .1217$, $p = .231$ (two-tailed).

In-class multiple choice test (B7) there was a significant difference in scores for first year ($M = 4.04$, $SD = .958$) and second year ($M = 4.73$, $SD = 1.100$); $t(41) = -2.119$, $p = .041$ (two-tailed).

Case study assignment (B8) there was no significant difference in scores for first year ($M = 4.81$, $SD = 1.167$) and second year ($M = 4.87$, $SD = .743$); $t(41) = -.176$, $p = .861$ (two-tailed).

Lecturer's teaching style (B9) there was no significant differences in scores for first year ($M = 5.31$, $SD = .838$) and second year ($M = 5.40$, $SD = .737$); $t(41) = -.355$, $p = .725$ (two-tailed).

Appendix 21: Independent Samples T-Test (post-unit) was conducted by year of enrolment to compare the level of agreement or disagreement regarding the influence of each of the teaching and assessment methods on learning.

Lectures (B1) there was no significant difference in scores for first year ($M = 5.15$, $SD = .675$) and second year ($M = 5.13$, $SD = .743$); $t(41) = -.090$, $p = .928$ (two-tailed).

Tutorials (B2) there was no significant difference in scores for first year ($M = 4.27$, $SD = 1.343$) and second year ($M = 4.27$, $SD = 1.624$); $t(41) = .005$, $p = .996$ (two-tailed).

Case Study workshops (B3) there was no significant difference in scores for first year ($M = 4.96$, $SD = .987$) and second year ($M = 4.20$, $SD = 1.014$); $t(41) = -.116$, $p = .908$ (two-tailed).

CD Learning Resources (B4) there was no significant difference in scores for first year ($M = 4.42$, $SD = 1.177$) and second year ($M = 4.33$, $SD = .724$); $t(41) = .690$, $p = .494$ (two-tailed).

Prescribed Text (B5) there was no significant difference in scores for first year ($M = 4.81$, $SD = .634$) and second year ($M = 5.00$, $SD = .926$); $t(41) = -.789$, $p = .435$ (two-tailed).

Extra readings and handouts (B6) there was no significant difference in scores for first year ($M = 4.58$, $SD = .758$) and second year ($M = 4.87$, $SD = .915$); $t(41) = .1093$, $p = .281$ (two-tailed).

In-class multiple choice test (B7) there was no significant difference in scores for first year ($M = 4.31$, $SD = 1.011$) and second year ($M = 4.67$, $SD = .816$); $t(41) = -1.17$, $p = .249$ (two-tailed).

Case study assignment (B8) there was no significant difference in scores for first year ($M = 5.08$, $SD = .688$) and second year ($M = 5.00$, $SD = 1.134$); $t(41) = -.271$, $p = .788$ (two-tailed).

Lecturer's teaching style (B9) there was no significant differences in scores for first year ($M = 5.19$, $SD = .749$) and second year ($M = 5.13$, $SD = .743$); $t(41) = -.243$, $p = .809$ (two-tailed).

Appendix 22: An Independent-Samples T-Test Time 2 (pre-unit) was conducted by year of enrolment to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed.

Development of high level academic, critical and reasoning skills (C1): there was no significant difference in scores for first year ($M = 4.81$, $SD = 1.132$) and second year ($M = 5.00$, $SD = .655$); $t(41) = -.601$, $p = .552$ (two-tailed).

Development of useful and relevant practical work-related skills (C2): there was no significant difference in scores for first year ($M = 5.27$, $SD = .778$) and second year ($M = 5.27$, $SD = .704$); $t(41) = -.011$, $p = .992$ (two-tailed).

Appendix 23: An Independent-Samples T-Test Time 2 (post-unit) was conducted by year of enrolment to compare the level of agreement or disagreement regarding if academic and work-related skills will be developed.

Development of high level academic, critical and reasoning skills (C1): there was no significant difference in scores for first year ($M = 4.73$, $SD = .874$) and second year ($M = 4.87$, $SD = .834$); $t(41) = -.487$, $p = .629$ (two-tailed).

Development of useful and relevant practical work-related skills (C2): there was no significant difference in scores for first year ($M = 4.77$, $SD = .863$) and second year ($M = 4.87$, $SD = .640$); $t(41) = -.380$, $p = .706$ (two-tailed).

Appendix 24: Distribution of responses to statements A.1 to C.2 on the 6-point scale by time and grade.

Key to the responses:

Time 1 = Pre unit; Time 2 = Post-unit.

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6

Statement A.1: Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations.

Statement A.2: Draw conclusions from data.

A.1

Time	Grade	3	4	5	6
1	HD		1	8	3
	DN		5	5	2
	CR		1	9	5
	PP			1	1
2	HD		2	8	5
	DN	1	4	5	1
	CR		3	6	2
	PP		1	3	

A.2

Time	Grade	4	5	6
1	HD	1	8	2
	DN	7	3	2
	CR	1	9	4
	PP		1	
2	HD	1	10	4
	DN	5	5	1
	CR	2	6	3
	PP	2	2	

Statement A.3: Apply this knowledge to case studies to reach reasoned conclusions about strategy.

A.3

Time	Grade	4	5	6
1	HD	5	5	2
	DN	5	5	2
	CR	3	8	4
	PP	1	1	
2	HD	3	8	4
	DN	5	5	1
	CR		8	3
	PP	2	1	1

A.4

Time	Grade	3	4	5	6
1	HD	1	7	2	2
	DN		7	5	
	CR		4	9	2
	PP		1		1
2	HD	1	3	6	5
	DN		6	4	1
	CR		3	4	4
	PP		1	2	1

Statement A.5: Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.

Statement A.6: Generate appropriate responses to key issues in strategic management.

A.5

Time	Grade	3	4	5	6
1	HD	1	7	2	2
	DN		7	5	
	CR		4	9	2
	PP		1		1
2	HD	1	3	6	5
	DN		6	4	1
	CR		3	4	4
	PP		1	2	1

A.6

Time	Grade	3	4	5	6
1	HD		4	5	3
	DN		6	5	1
	CR		1	10	4
	PP			2	
2	HD	1	1	8	5
	DN	1	4	5	1
	CR		2	7	2
	PP			3	1

Statement A.7: Explain central theory in strategic management.

Statement A.8: Apply strategic management principles to present or future work experiences.

A.7

Time	Grade	3	4	5	6
1	HD	2	7	3	
	DN	7	5		
	CR	4	8	3	
	PP	1	1		
2	HD	1	3	8	3
	DN	1	7	7	2
	CR	1	8	2	
	PP	1	2	1	

A.8

Time	Grade	3	4	5	6
1	HD		4	5	3
	DN	1	5	4	2
	CR	1	3	4	7
	PP			2	
2	HD	1	2	7	5
	DN	1	5	4	1
	CR		1	8	2
	PP		1	3	

Statement A.9: Integrate conceptual approaches to strategic management and write about real world experiences.

Statement A.10: Demonstrate good written communication in English.

A.9

Time	Grade	3	4	5	6
1	HD	1	6	2	3
	DN	3	5	3	1
	CR		4	10	1
	PP			1	1
2	HD	2	8	5	
	DN	6	4	1	
	CR	2	6	3	
	PP		4		

A.10

Time	Grade	2	3	4	5	6
1	HD			6	4	2
	DN		1	3	6	2
	CR	1	1	3	8	2
	PP			1	1	
2	HD			4	9	2
	DN		1	6	3	1
	CR			4	6	1
	PP			3	1	

Statement A.11: Present well-reasoned written communication.

A.11

Time	Grade	3	4	5	6
1	HD		4	6	2
	DN	1	4	4	3
	CR	2	4	6	3
	PP		1		1
2	HD		2	9	4
	DN		8	3	
	CR		2	7	2
	PP		2	1	1

Statement B.1: Lectures and their contribution to learning.

B.1

Time	Grade	3	4	5	6
1	HD		2	5	5
	DN		4	4	4
	CR		3	4	8
	PP			1	1
2	HD		2	8	5
	DN		4	4	3
	CR			7	4
	PP		1	2	1

Statement B.2: Tutorials and their contribution to learning.

B.2

Time	Grade	1	2	3	4	5	6
1	HD					4	8
	DN				3	3	6
	CR			1	1	6	7
	PP						2
2	HD	1	1		3	6	4
	DN	2	1	3	2	2	1
	CR				4	6	1
	PP		1		1	1	1

Statement B.3: Case Study workshops and their contribution to learning.

B.3

Time	Grade	3	4	5	6
1	HD			8	4
	DN	1	3	3	5
	CR	2		4	9
	PP				2
2	HD		4	8	3
	DN		7	2	2
	CR		1	6	4
	PP			3	1

Statement B.4: CD Learning
Resources and its contribution to
learning

B.4

Time	Grade	2	3	4	5	6
1	HD		1	6	4	1
	DN		4	4	3	1
	CR	1	3	7	1	3
	PP				1	1
2	HD	1	1	5	5	3
	DN	2		8	1	
	CR		1	5	4	1
	PP				4	

Statement B.5: Prescribed textbook
and its contribution to learning

B.5

Time	Grade	1	2	3	4	5	6
1	HD				6	4	2
	DN			1	3	6	2
	CR	1		1	3	8	2
	PP				1	1	
2	HD				4	9	2
	DN			1	6	3	1
	CR				4	6	1
	PP				3	1	

Statement B.6: Extra readings and handouts.

B.6

Time	Grade	2	3	4	5	6
1	HD	1		5	5	1
	DN		1	8	1	2
	CR		2	4	6	2
	PP			1	1	
2	HD		1	3	8	3
	DN		2	4	4	1
	CR			4	5	2
	PP			2	2	

Statement B.7: In-class multiple choice test.

B.7

Time	Grade	1	3	4	5	6
1	HD			7	1	4
	DN	1	3	3	4	1
	CR		2	8	4	1
	PP		1	1		
2	HD		2	3	8	2
	DN	1	1	6	3	
	CR			3	7	1
	PP		1	2	1	

Statement B.8: Case study essay assignment.

Statement B.9: Lecturer's teaching style.

B.8

Time	Grade	1	2	3	4	5	6
1	HD				2	8	2
	DN	1			3	5	3
	CR		1		3	8	3
	PP				1		1
2	HD			1		8	6
	DN		1		3	4	3
	CR				1	7	3
	PP				1	3	

B.9

Time	Grade	3	4	5	6
1	HD		1	5	6
	DN		3	4	5
	CR	1	1	4	9
	PP			1	1
2	HD		2	6	7
	DN		5	3	3
	CR		1	6	4
	PP			3	1

Statement C.1: High level academic, critical and reasoning skills.

Statement C.2: Useful and relevant practical work-related skills.

C.1

Time	Grade	1	3	4	5	6
1	HD				11	1
	DN	1	1	4	4	2
	CR		1	2	7	5
	PP				1	1
2	HD			4	8	3
	DN		2	5	4	
	CR		1	1	4	5
	PP			1	3	

C.2

Time	Grade	3	4	5	6
1	HD		2	9	1
	DN		4	2	6
	CR		1	4	10
	PP			1	1
2	HD		4	6	5
	DN	1	6	3	1
	CR		2	7	2
	PP		2	2	

Appendix 25: Factor Analysis – Total Variance Explained

Component		Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
	1	8.615	39.161	39.161	8.615	39.161	39.161	4.825	21.934	21.934
	2	2.648	12.037	51.198	2.648	12.037	51.198	3.690	16.774	38.708
	3	2.089	9.497	60.695	2.089	9.497	60.695	2.972	13.511	52.219
	4	1.409	6.404	67.099	1.409	6.404	67.099	2.470	11.228	63.448
	5	1.203	5.469	72.568	1.203	5.469	72.568	2.007	9.120	72.568
	6	.964	4.381	76.950						
	7	.863	3.924	80.874						
	8	.740	3.363	84.237						
	9	.658	2.991	87.228						
	10	.577	2.622	89.850						
	11	.465	2.116	91.966						
	12	.381	1.730	93.695						
	13	.301	1.368	95.064						
	14	.234	1.063	96.127						
	15	.216	.982	97.109						
	16	.179	.815	97.924						
	17	.147	.666	98.590						
	18	.126	.571	99.161						
	19	.080	.362	99.522						
	20	.052	.235	99.758						
	21	.028	.125	99.883						
	22	.026	.117	100.000						

Appendix 26: Component transformation Matrix

Component Transformation Matrix					
Component	1	2	3	4	5
1	.659	.496	.445	.287	.199
2	-.458	.435	-.344	.634	.285
3	.212	-.665	-.050	.288	.654
4	.558	.016	-.782	.086	-.262
5	-.012	-.350	.263	.653	-.618

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Appendix 27: Component Matrix

Component Matrix^a

	Component				
	1	2	3	4	5
Demonstrate knowledge of the main theoretical concepts and frameworks relating to strategy in organisations.	.797	-.223	.110	-.247	-.077
Draw conclusions from strategy data.	.704	-.270	.372	-.006	-.320
Apply this knowledge to case studies to reach reasoned conclusions about strategy.	.644	-.479	.198	.414	-.026
Explain strategy in terms of the complexity and uncertainty facing business organisations.	.743	-.331	.168	.248	.006
Evaluate the usefulness and relevance of the main theoretical concepts and frameworks in strategic management.	.728	-.135	.491	-.152	.015
Generate appropriate responses to key issues in strategic management.	.665	-.253	-.095	.121	.331
Explain central theory in strategic management.	.712	.061	.210	.298	-.195
Apply strategic management principles to present or future work experiences	.727	-.200	-.378	-.115	.161
Integrate conceptual approaches to strategic management and write about real world experiences	.712	-.227	.017	.187	.114
Demonstrate good written communication in English	.621	-.165	-.114	-.481	.301
Present well-reasoned written arguments	.680	-.317	-.020	-.445	.107
Lectures	.692	.147	-.497	.145	-.137
Tutorials	.668	.301	-.393	-.273	-.318
Case study workshops	.634	.493	.032	-.077	-.024
CD Learning Resources	.487	.579	-.144	.091	-.145
Prescribed Text	.355	.438	.032	-.034	.452
Extra Readings and handouts	.306	.542	-.234	.457	.195
In-class multiple choice test	.262	.448	.543	-.152	-.425
Case study essay assignment	.341	.484	.454	-.022	.437
Lecturer's Teaching Style	.661	.194	-.489	-.180	-.194
Development of high level academic, critical and reasoning skills	.473	.470	.403	-.039	.096
Development of useful and relevant practical work-related skills	.725	-.111	-.200	.364	-.045

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Appendix 28

BMA799
Strategic Management
(Full-time)

Semester 2, 2010

This unit will be offered in:

Hobart

The lecturer responsible will be:

Dr Dallas Hanson (Lecturer-in-Charge)

Room: 305 (Hobart)

Phone: 6226 1877

Email: Dallas.Hanson@utas.edu.au

<http://www.utas.edu.au/mgmt/student.htm>

Introduction to the Unit

Strategic management is an intellectually stimulating and very useful subject. A good understanding of it makes it possible to think with precision about the activities of organisations, large or small, commercial or non-profit. The vocabulary and associated understandings you develop mean that you frame the world differently, more fully, reading a newspaper is never the same again.

This study of strategy is best approached with an open and enquiring mind, a willingness to work hard and consistently and a willingness to listen to advice and learn from it. If you are not after a business career, don't be put off by the fact that it sounds so business oriented; the concepts are generic and the principles underlying strategic management are applicable to all organisations.

Enrolment in the unit

Unless there are exceptional circumstances, students should not enrol in BMA units after the end of week two of semester, as the School cannot guarantee:

- that any extra assistance will be provided by the teaching team in respect of work covered in the period before enrolment; and
- that penalties will not be applied for the late submission of any piece or pieces of assessment that were due during that period.

Learning Outcomes

On completion of this unit, you should be able to:

- Knowledge and understanding of the main theories and concepts of strategy.
- Apply this knowledge to case studies.
- Communicate about strategy theory and practice.
- Use strategy concepts to discuss contemporary organisations
- Evaluate theories and concepts in strategic management.

Generic Graduate Attributes

The University has defined a set of generic graduate attributes (GGAs) that can be expected of all graduates (see <http://www.utas.edu.au/tl/policies/index.htm>). By undertaking this unit you should make progress in attaining the following attributes:

Knowledge

- To enable you to understand and explain central theory in strategic management.
- To enable you to apply strategic management principles at work.
- To enable you to integrate strategic management with real world situations.

Communication Skills

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- Present well-reasoned arguments in strategy-oriented English.
- Listen respectfully to and evaluate the views of others.

Problem Solving Skills

- Conceptualise strategic problems and formulate a range of solutions.
- Analyse the external world using strategy theory.
- Analyse the internal world of the organisation using strategy theory.
- Find, evaluate and use relevant strategy information.

Global Perspective

- Demonstrate an awareness of the local and global context of strategic management issues.
- Be able to analyse and integrate global issues into local strategies.

Social Responsibility

- Acknowledge the social and ethical responsibilities of organisations and the link to strategy formation and implementation.

Texts

Prescribed Texts

Bouquet, T. & Ousey, B 2009. *Cold steel*. Abacus: London

Hanson, D, Dowling, P, Hitt, M, Ireland, R. & Hoskisson, R. 2008. *Strategic management: Competitiveness and globalisation*. (third ed.) Melbourne: Thompson.

School Publications

Students must obtain the following electronic publications which are available from the School of Management website:

<http://www.utas.edu.au/mgmt/student.htm>

Writing Assignments: A Guide

Referencing Style Manual

Recommended Reading

The publications listed below are highly recommended for further reading on the topics covered in the unit.

Books

Barney, J. & Hesterly, W. 2006. *Strategic management and competitive advantage*. New Jersey: Pearson.

Belanger, J., Berggra, C., Bjorkman, T. & Kohler, K. 2000. *Being local worldwide*. USA: Cornell University Press.

Barron, J. 2006. *Piano* New York: Times new

Chandler, A., Hagstrom, P. & Solvell, O. 2000. *The dynamic firm*. USA: Oxford UP.

De Rond, M. 2006. *Strategic alliances as social facts*. Cambridge, UK: Cambridge UP.

De Wit, B. & Meyer, R. 2004. *Strategy: Process, content, context* (3rd ed.). London: Thompson.

Fishman, T. 2006. *China, inc: The relentless rise of the next great superpower*. Sydney: Pocket Books.

Harvey, D. 1989. *The condition of post modernity*. Oxford: Blackwell.

Hubbard, G. 2004. *Strategic management: Thinking, analysis and action*. Sydney: Prentice-Hall.

Joyce, P. 2000. *Effective strategic change in the public sector*. London: Wiley.

Klein, N. 2000. *No logo*. London: Scribe.

Lewis, G., Morkel, A., Hubbard, G., Davenport, S. & Stockport, G. 1999. *Australian and New Zealand strategic management*. Sydney: Prentice-Hall.

Longman, P. 2004. *The Empty cradle*. New York: Basic Books.

McKiernan, P. (Ed.). 1996. *Historical evolution of strategic management–Volumes 1 & 2*. Sydney: Dartmouth.

Mintzberg, H. 1994. *The rise and fall of strategic planning*. New York: The Free Press.

Mintzberg, H. & Quinn, B. (Eds.). 1998. *Readings in the strategy process* (3rd ed.). Sydney: Prentice-Hall.

Porter, M. 1990. *Competitive advantage of nations*. London: MacMillan.

Porter, M. 1985. *Competitive advantage*. New York: The Free Press.

Porter, M. 2004. *Competitive strategy*. New York: The Free Press. (first published 1980)

Porter, M., Taeuchi, H. & Sakakibara, M. 2000. *Can Japan compete?* Hampshire: MacMillan.

Journals and Periodicals

Apart from books, you will find it valuable to get into the practice of reading relevant articles from journals and periodicals (including newspapers and magazines).

Academy of Management Journal

Academy of Management Review

Asia Pacific Journal of Management

California Management Review

Harvard Business Review

Journal of General Management

Long Range Planning

Sloan Management Review

Strategic Management Journal

In addition to the journals, try to read *The Australian Financial Review* and magazines which treat management in a serious way. *The Bulletin*, *Fortune International*, *Business Week International* and *Business Review Weekly* and *The New Yorker* (a terrific magazine) are examples of relevant magazines.

Unit Structure

Classes are held every week. There is a three-hour time slot that is used for a lecture and, as the unit advances, analysis of cases. There are also articles that you must read, workshops to attend and a help desk before assignments are due.

Flexible Learning: MyLO

MyLO software has been incorporated into the delivery of this unit to enhance the learning experience by providing access to up to date course materials and by allowing for online discussion through this web based environment.

To access MyLO from your own computer you will need the appropriate software, and hardware to run that software. See *Learning Online* at <http://uconnect.utas.edu.au/> for computer software you will need.

Note: Older computers may not have the hardware to run some of the required software applications. Contact your local IT support person or the Service Desk on 6226 1818 if you experience difficulties.

Privacy Policy and Notice

The School of Management takes the utmost care to protect the privacy and security of your personal information and to ensure its accuracy.

If you have any concerns about your privacy in MyLO please contact the lecturer-in-charge of this unit or view the University of Tasmania MyLO Privacy Policy Statement available from the university website on <http://www.utas.edu.au/coursesonline/privacy.htm>.

Assessment

In order to pass this unit you must achieve an overall mark of at least 50 per cent of the total available marks. Details of each item of Coursework are provided in the Assignment Topics section.

Method of Assessment	Value	Due Date	Length*
Coursework			
In-class Test	10	9 August	30 minutes, 40 questions
Case Study Assignment	30	13 September	10 pages, A4, 12 point Times ,1.5 spacing (not including the cover page)
Take-home Examination	60 (40 marks case, two essays 20 marks)	Exam Period	2 days
Total Marks	100		

* **Page Limit:** The page count includes everything but the cover page which has your name and tutor 's name on it

- **Marking:** The system used for grading the case study assignment and case study within the examination is based on the idea that students should be rewarded for understanding and using

the case study system. Accordingly, you get rewarded when you learn; you will be given the best mark you are awarded at either stage, at the assignment case study stage or examination stage. For example if you are given 50% for the assignment case study but then get 80% in the take home exam case you will be given the higher mark for BOTH assessments and your final mark is 80% for cases (a mark out of 70).

- If you get a high score in the assignment case you still must complete the exam case, and in order to carry your high mark into the final score for the unit you must score over 50% for the exam case.

Study Week

All weekday postgraduate units offered by the School of Management are scheduled to include a Study Week. The dates for this semester are shown in the attached Study Schedule.

The purpose of the Study Week is to allow students an opportunity to consolidate their studies thus far, and to complete upcoming assignments.

Examination

Format

The final examination will be a two day take-home examination. It will be available from the School of Management office on the morning of the exam and must be returned by 10am the day after next .

The take home examination will consist of a case study with questions to be answered about the case. In addition, you will need to answer two (2) essay questions from a choice of five (5). In the weeks leading up to the exam period at least ten possible essay questions will be distributed to students. This same list will be used to set the exam. In other words, you will know the exam questions before the exam and can prepare answers beforehand. These questions are relatively complex and involve thought rather than simple description of theory. The exam case is limited to 10 pages of text. The essays are each a maximum of 3 pages , plus references.

The normal rules for examinations remain: you must not collaborate or share work, and plagiarism will result in failure. In addition, if you are sick on the day of the examination you must obtain a medical certificate and then, if permission has been granted, sit a supplementary exam at a later date

Supplementary Examination

Except in special circumstances and on the recommendation of the lecturer-in-charge or the Head of School, a student who fails will not be granted a supplementary examination.

Special Consideration and Student Difficulties

If a student is experiencing difficulties with their studies or assignments, have personal or life planning issues, disability or illness which may affect their course of study, they are advised to raise these with their lecturer in the first instance. Students may also contact the Student Adviser, who will be able to help in identifying the issues that need to be addressed, give general advice, assist by liaising with academic staff, as well as referring students to any relevant University-wide support services. The Student Adviser is located in room 318a in the Commerce Building in Hobart and is contactable by phone on 6226 1916. In Launceston the Student Adviser is located in room A168 in Building A and is contactable by phone on 6324 3312. There is also a range of University-wide support services available including Student Services, International Services and Learning Development. Please refer to the *Current Students* homepage at: <http://www.utas.edu.au/students/index.html>

Should a student require assistance in accessing the Library, visit their website for more information at <http://www.utas.edu.au/library/>

Students who have completed their examinations and who feel that they have been disadvantaged due to illness or other circumstances affecting their study, may fill out a form to request that their lecturer takes this into consideration when marking the examination. Forms should be submitted directly to the relevant school, accompanied by appropriate supporting documentation, as soon as possible after the completion of the examination. Granting of special consideration is at the discretion of the lecturer and school. The relevant form can be found at the following website: [http://www.studentcentre.utas.edu.au/examinations and results/forms_files/index.htm#eits](http://www.studentcentre.utas.edu.au/examinations_and_results/forms_files/index.htm#eits)

Students with a non-English speaking background may be permitted to take a bilingual dictionary into an exam. This dictionary must not be annotated, that is, it must have no notes written in it. In order to use a bilingual dictionary students must request permission from the Student Centre.

Submission of Coursework

Lodging Coursework

All Coursework must have the School of Management Assignment Cover Sheet and Title Page attached, both of which are available as a blank template from the School of Management website: <http://www.utas.edu.au/mgmt/student.htm>

All assignments must include the tutor's name on the assignment Cover Sheets when they are handed in. If this is not done the assignment will not be accepted and therefore marked.

Please remember that you are responsible for lodging your Coursework on or before the due date. We suggest you keep a copy. Even in the most perfect systems, items sometimes get lost.

Hobart students: Lodge in assignment box at room 316, Commerce & Economics Building.

Launceston students: Lodge in assignment box beside room A170.

Late Coursework

Written Work

Extensions will only be granted on medical or compassionate grounds and will not be granted because of work or other commitments. Requests for extensions should be **made in writing** to the lecturer-in-charge prior to the due date. Medical certificates or other evidence must be attached and must contain information which justifies the extension sought.

Late assignments which have **not** been granted an extension will, at the lecturer's discretion, be penalised by deducting ten per cent of total marks for each full day overdue.

Assignments submitted more than five days late will normally not be accepted by the lecturer-in-charge.

Tests

Students who are unable to sit a test on medical or compassionate grounds (work or other commitments are not considered 'compassionate grounds') may request that they be permitted to submit alternative Coursework.

Please do not expect a special test to be held for you if you choose to go on holidays or undertake other activities on the scheduled date. If you do need to request alternative Coursework, you should do so in writing to the lecturer-in-charge prior to the due date. Medical certificates or other evidence must be attached and must contain information which justifies the request. The telephone number of the doctor should also be included.

Return of Coursework

Coursework will be returned during classes or it can be collected from the lecturer's or tutor's room at nominated times; it will not be available from the School's offices.

Academic Misconduct

Academic misconduct includes cheating, plagiarism, allowing another student to copy work for an assignment or an examination and any other conduct by which a student:

- (a) seeks to gain, for themselves or for any other person, any academic advantage or advancement to which they or that other person are not entitled; or
- (b) improperly disadvantages any other student.

Students engaging in any form of academic misconduct may be dealt with under the Ordinance of Student Discipline, and this can include imposition of penalties that range from a deduction/cancellation of marks to exclusion from a unit or the University. Details of penalties that can be imposed are available in the Ordinance of Student Discipline – Part 3 Academic Misconduct, see

<http://www.utas.edu.au/universitycouncil/legislation/>.

Plagiarism

Plagiarism is a form of cheating. It is taking and using someone else's thoughts, writings or inventions and representing them as your own, for example:

- using an author's words without putting them in quotation marks and citing the source;
- using an author's ideas without proper acknowledgment and citation; or
- copying another student's work.

If you have any doubts about how to refer to the work of others in your assignments, please consult your lecturer or tutor for relevant referencing guidelines, and the academic integrity resources on the web at <http://www.utas.edu.au/tl/supporting/academicintegrity/index.html>.

The intentional copying of someone else's work as one's own is a serious offence punishable by penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, to exclusion from a unit, a course or the University.

The University and any persons authorised by the University may submit your assessable works to a plagiarism checking service, to obtain a report on possible instances of plagiarism. Assessable works may also be included in a reference database. It is a condition of this arrangement that the original author's permission is required before a work within the database can be viewed.

For further information on this statement and general referencing guidelines, see <http://www.utas.edu.au/plagiarism/> or follow the link under 'Policy, Procedures and Feedback' on the Current Students homepage.

Occupational Health and Safety (OH&S)

The University is committed to providing a safe and secure teaching and learning environment. In addition to specific requirements of this unit you should refer to the University's policy at: http://www.admin.utas.edu.au/hr/ohs/pol_proc/ohs.pdf

Unit Presentation

The course is built around reading, reflective listening and note taking, discussion, and writing good prose. As resources you have yourself, your lecturer, your tutor, two texts, tutorials, workshops, and lectures. Here is how it works:

1. The texts

Bouquet and Ousey is essential reading and should be completed early, by week two/three. It is an up to date and very readable journalistic account of a multi billion dollar struggle between two giants in the global steel industry, Mittal and Arcelor. In the end there is only one left. We will analyse the book as we go along in the course, using the strategy concepts we discuss to explain the strategic moves outlined.

Hanson et al is your theory text. It also includes cases that we will analyse. This is your 'theory machine' and is the basis of the course. YOU MUST have access to a copy.

2. The tutorials

You will attend one each week. There, your tutor will further explain the strategy concepts and will discuss articles with you (see point 4). You must prepare for tutorials by doing the appropriate reading. You can ask questions about the theory at tutorials.

3. The workshops

One hour workshops will be held most sessions. At these we will analyse cases, starting with aspects of the *Cold Steel* case. Your job is to conduct a written analysis of the appropriate case. Workshops are the best way of building and (checking on) your understanding of case analysis.

4. The articles

A range of strategy articles will be distributed to you in weeks one and two. They are organised in chapter order (following the order in the Hanson text). You must read them and be able to discuss them at tutorials.

5. The help desks

Before the first assignment there will be a 'help desk' held each week. At this the lecturer and tutors will answer questions about the assignment. You must have done some work for these to be any help, do not come without precise questions since it wastes time.

Tutorial Program

(In addition to discussing the articles listed, tutorials will involve explanation of theory and answering your questions. Other articles will be added as the semester proceeds).

Weeks 1 and 2

Discussion of theory.

Week 3

The Economist. 2006. A long walk: A survey of Saudi Arabia. January 7. *Survey*, 3-12.

Week 4

Kling, K, & Goteman, I. 2003. Ikea CEO Anders Dahlvig on international growth and Ikea's unique corporate culture and brand identity. *AME*, 17 (1): 31-38.

Week 5

Mehri, D. 2006. The darker side of lean: An insider's perspective on the realities of Toyota's production system. *AMP*, 20 (2): 21-43.

Week 6

Cascio, W. 2005. Strategies for possible restructuring. *AME*, 19 (4): 39-51.

Week 7

School of Management Study Week. No classes.

Week 8

Hoppe, M. 2004. An interview with Geert Hofstede. *AME*, 18 (1): 75-80.

Week 9

Arino, A & Reuer, J. 2004. Designing and renegotiating strategic alliance contracts. *AME*, 18 (3): 37-49.

Week 10

Theory discussion.

Week 11

Paik, Y & Choi, D. 2005. The shortcomings of a standardised global knowledge management system: The case study of Accenture. *AME*, 19 (2): 81-85.

Assignment Topics

In-class Test

Due Date: Monday 9 August

Length: 40 multiple choice questions, 30 minutes

Value: 10 marks

You will be answering 40 multiple choice questions.

Case Study Assignment

Due Date: Monday 13 September

Length: 10 pages, A4, 12 point, 1.5 spacing (not including the cover page)

Value: Part of the 70 mark case system (see page 6 for details).

Case

Read the case: DJs

Question

Outline the strategies that DJs should implement in order to prosper in the coming decade.

Notes

- A marking guide that will identify the criteria by which this Assignment will be assessed will be made available early in the Semester.
- You may use sub-headings but the Assignment must follow a basic narrative form. Dot points may be used to assist in communicating your answer.
- You may use academic or other material extraneous to the Case to assist you in developing and justifying your recommended strategies however you usually do not need to do so. The case should be analysed in terms of the timeframe used in it.
- Marks will be deducted for failure to comply with MBA presentation standards
- No material over the 10 page limit will be read by the marker, that is, pages 11 and onwards, if you include them, are a waste of paper.

Generic Case Analysis - Strategy Version 3

Criteria	HD (High Distinction)		DN (Distinction)	CR (Credit)	PP (Pass)	NN (Fail)
	90% – 100%	80% - 89%				
Identify and analyse issues in the general environment (10%)	All relevant issues in the general environment identified and comprehensively analysed.	Most relevant issues in the general environment identified and correctly analysed.	Many relevant issues in the general environment identified and correctly analysed.	More than half the relevant issues in the general environment identified and correctly analysed.	Around half the relevant general environment issues identified and correctly analysed.	Some relevant general environment issues identified and analysed.
Identify and analyse issues industry and competitor environment (10%)	All relevant issues in the industry/competitor environment identified and comprehensively analysed.	Most relevant issues in the industry/competitor environment identified and correctly analysed.	Many relevant issues in the industry/competitor environment identified and correctly analysed.	More than half the relevant issues in the industry/competitor environment identified and correctly analysed.	Around half the relevant industry/competitor environment issues identified and correctly analysed.	Some relevant industry/competitor environment issues identified and analysed.
Identify and analyse issues internal environment (10%)	All relevant issues in the internal environment identified and comprehensively analysed.	Most relevant issues in the internal environment identified and correctly analysed.	Many relevant issues in the internal environment identified and correctly analysed.	More than half the relevant issues in the internal environment identified and correctly analysed.	Around half the relevant internal environment issues identified and correctly analysed.	Some relevant internal environment issues identified and analysed.
Apply strategy theory to the issues. (20%)	A wide range of relevant strategy theories applied to all issues identified.	Relevant strategy theory applied to most issues identified.	Relevant strategy theory applied to most issues identified.	Mostly relevant strategy theory applied to most issues identified.	Some appropriate strategy theory applied to most issues identified.	Opinion and some appropriate strategy theory applied to some issues identified.
Propose and justify strategies.	Insightful and plausible strategies are proposed and justified. They	Insightful and plausible strategies are proposed and justified. They	Predominantly plausible strategies are proposed and justified. They	Mostly plausible strategies are proposed and justified. They demonstrate a	Some plausible strategies are proposed and justified. They demonstrate a	Some strategies are proposed and partly justified. They demonstrate a partial

(30%)	demonstrate an extremely perceptive synthesis of theory and issue analysis.	demonstrate a synthesis of theory and issue analysis.	demonstrate a synthesis of theory and issue analysis.	reasonable synthesis of theory and issue analysis.	reasonable synthesis of theory and issue analysis.	synthesis of theory and issue analysis.
Write using academic language and well organised structure. (15%)	Logical structure and a coherent, concise and fluent argument in discipline specific academic language.	Logical structure and a coherent, concise well developed argument in discipline specific academic language.	Well organised argument, mostly logical, concise and coherent, and in discipline specific academic language	Well organised argument, generally logical, concise and coherent, and mostly in discipline specific academic language.	Argument generally organised and coherent and generally in discipline specific academic language.	Argument partially organised and sometimes coherent. Some discipline specific academic language.
Adhere to referencing conventions and acknowledge sources. (5%)	Acknowledged all relevant sources. Accurate and consistent referencing system	Acknowledged all relevant sources. Accurate and consistent referencing system	Acknowledged all relevant sources. Mostly accurate referencing system.	Acknowledged almost all relevant sources. Mostly accurate referencing system.	Acknowledged most relevant sources. Reasonably accurate referencing system.	Acknowledged some sources. Some referencing conventions followed.
Assessment Submission Rules: Rule 1: Failure to acknowledge sources will lead to an overall fail grade. Rule 2: Incoherent English writing will lead to a fail grade and writing that is difficult to understand will result in reduced marks due to the impediment it creates in determining whether or not the student has met the above standards.						

Generic Essay Rubric

Criteria	HD (High Distinction)		DN (Distinction)	CR (Credit)	PP (Pass)	NN (Fail)
	90% – 100%	80% - 89%	70% - 79%	60% - 69%	50% - 59%	0% - 49%
Identify issues 20%	Identifies all issues applicable to the question.	Identifies most issues applicable to the question.	Identifies many of the issues applicable to the question.	Identifies more than half the issues applicable to the question.	Identifies around half of the issues applicable to the question.	Identifies some issues applicable to the question.
Analyse and evaluate issues related to question and make an argument. 20%	Analyses and evaluates issues and makes a focussed, plausible, and insightful argument that encompasses the entire scope of the issues.	Analyses and evaluates issues and makes a focussed, plausible, and insightful argument that encompasses the issues.	Analyses and evaluates issues and makes a reasonably focussed, plausible and insightful argument that encompasses the issues.	Analyses and evaluates issues and for the most part makes a focussed and plausible argument that encompasses most of the issues.	Analyses and evaluates issues and makes a plausible argument that encompasses the core of the issues.	Analyses and evaluates issues and makes a semi-plausible argument that encompasses some of the issues.
Use of strategy theory to support argument. 40%	Applies comprehensive knowledge of strategy theory to support the argument.	Applies broad knowledge of strategy theory to support the argument.	Applies relatively detailed knowledge of strategy theory to support the argument.	Applies reasonable knowledge of strategy theory to support the argument.	Applies basic knowledge of strategy theory to support the argument.	Applies some knowledge of aspects of strategy theory to support the argument.
Write using academic language and structure.	Logical structure and a coherent, concise well developed essay in discipline specific	Logical structure and a coherent, concise well developed essay in discipline specific	Well organised essay, mostly logical, concise and coherent, and in discipline specific academic	Well organised essay, generally logical, concise and coherent, and mostly in discipline specific	Reasonably organised essay, generally coherent and generally in discipline specific	Essay partially organised and sometimes coherent. Some discipline specific

15%	academic language.	academic language.	language	academic language.	academic language.	academic language.
Adhere to referencing conventions and acknowledge sources. Weight = 5%	Acknowledged all sources. Accurate and consistent referencing	Acknowledged all sources. Mostly accurate referencing.	Acknowledged all sources. Mostly accurate referencing.	Acknowledged most sources. Mostly accurate referencing.	Acknowledged most sources. Reasonably accurate referencing.	Acknowledged some sources. Some referencing conventions followed.
<u>Assessment Submission Rules:</u> Rule 1: Failure to acknowledge sources will lead to an overall fail grade. Rule 2: Incoherent English writing will lead to a fail grade, and writing that is difficult to understand will result in reduced marks because it inhibits understanding of written material.						

Study Schedule

Semester 2, 2010

Week	Start of Week	Text Chapter	Topic	Due Dates
1	12 July	Chapters 1 and 2	Strategic management and analysing the external environment	
2	19 July	Chapter 3	The internal environment	
3	26 July	Chapter 4	Business level strategy	
4	2 August	Chapter 5	Competitive dynamics	
5	9 August	Chapter 6 and extra reading	Strategy in mature industries and Corporate strategy	In-class Test 9 August
6	16 August	Chapter 7	Acquisition and restructuring strategy	
7	23 August		Study Week	
Mid-Semester Break 30 August – 3 September				

8	6 September	Chapter 8	International strategy	Case Study Assignment due 13 September
9	13 September	Chapter 9	Cooperative strategy	
10	20 September	Chapter 10	Corporate governance	
11	27 September	Chapter 11	Organisation structure	
12	4 October	Chapter 12	Strategic leadership	
13	11 October		Case analysis practice	
A Calendar/Study Planner showing dates is available from School of Management website at http://www.utas.edu.au/mgmt/student.htm .				